

Volume 16

Pages 2453 - 2664

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

Before The Honorable Richard Seeborg, Judge

UNITED STATES OF AMERICA,	)	
	)	
Plaintiff,	)	
	)	
VS.	)	NO. 3:20-CR-00249 RS
	)	
ROWLAND MARCUS ANDRADE,	)	
	)	
Defendant.	)	
_____	)	

San Francisco, California  
Tuesday, March 4, 2025

**TRANSCRIPT OF JURY TRIAL PROCEEDINGS**

**APPEARANCES:**

For Plaintiff:

PATRICK D. ROBBINS  
ACTING UNITED STATES ATTORNEY  
450 Golden Gate Avenue  
San Francisco, California 94102  
**BY: CHRISTIAAN HIGSMITH**  
**DAVID J. WARD**  
**MATTHEW CHOU**  
**ASSISTANT UNITED STATES ATTORNEYS**

For Defendant:

KING & SPALDING, LLP  
50 California Street, Suite 3300  
San Francisco, California 94111  
**BY: MICHAEL J. SHEPARD, ATTORNEY AT LAW**

**(APPEARANCES CONTINUED ON FOLLOWING PAGE)**

REPORTED BY: Ana Dub, RDR, RMR, CRR, CCRR, CRG, CCG  
CSR No. 7445, Official United States Reporter

**APPEARANCES:** (CONTINUED)

For Defendant:

KING & SPALDING, LLC  
1700 Pennsylvania Avenue, NW  
Washington, D.C. 20006

**BY: KERRIE C. DENT, ATTORNEY AT LAW**

KING & SPALDING, LLC  
1185 Avenue of the Americas, 34th Floor  
New York, New York 10036

**BY: DAINEC P. STEFAN, ATTORNEY AT LAW**

LAW OFFICES OF CINDY A. DIAMOND  
58 West Portal Avenue, Suite 350  
San Francisco, California 94127

**BY: CINDY A. DIAMOND, ATTORNEY AT LAW**

Also Present:

**Special Agent Brendon Zartman  
Tina Rosenbaum, Paralegal  
Ed Jackson, Trial Technician**

I N D E X

Tuesday, March 4, 2025 - Volume 16

PAGE VOL.

Charging Conference

2639 16

DEFENDANT'S WITNESSESPAGE VOL.MIN, ERIK

(SWORN)

2471 16

Direct Examination by Mr. Stefan

2471 16

Cross-Examination by Mr. Chou

2533 16

Redirect Examination by Mr. Stefan

2591 16

Recross-Examination by Mr. Chou

2615 16

ARMSTRONG, PSY.D., LEVI

(SWORN)

2617 16

Direct Examination by Ms. Diamond

2617 16

## PROCEEDINGS

Tuesday - March 4, 2025

8:10 a.m.

P R O C E E D I N G S

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(Defendant present, out of custody.)

(Proceedings were heard out of the presence of the jury.)

**THE COURT:** Good morning.

**ALL:** Good morning.

**THE COURT:** Okay. I'm told there was more paper flying yesterday, so bring me up to speed.

I didn't -- I spoke briefly with my folks, but I haven't had a chance to review whatever -- I had a chance to review what was filed for the 2 o'clock hour, but not what was filed thereafter. So I understand there are motions by the Government.

**MR. HIGHSMITH:** Yes, Your Honor. We'll start with Mr. Chou.

**MR. CHOU:** Yes, Your Honor. So this is referring to Docket 602. Yesterday around 4:07 p.m., the Defense disclosed another piece of documentation, an 18-page Word doc with biometric logos and photos and the like as a basis --

**THE COURT:** Can you hand it up? I haven't seen this.

**MR. CHOU:** Oh. Yes, Your Honor. This is a black-and-white version, but there's a color version attached to the motion, Your Honor.

**THE COURT:** Okay.

## PROCEEDINGS

1           **MR. CHOU:** And the Defense notified the Government  
2 that they may use this as part of Mr. Min's testimony, and sure  
3 enough, at 9:02 p.m., they sent updated demonstratives or,  
4 rather, what they will move to be in evidence as exhibits, a  
5 number of new slides. And one of them, on page -- there's no  
6 page numbers, but roughly in the middle of the demonstrative  
7 set is a snapshot from this new Word document that was  
8 disclosed yesterday at 4 o'clock.

9           So the Government's position is that this is highly  
10 prejudicial. It's an unauthenticated Word document that  
11 appears to be authored by Mr. Andrade himself, based on the  
12 unauthenticated Word metadata, and we just don't have time to  
13 respond to this.

14           **THE COURT:** And you're moving both with respect to  
15 this demonstrative, you said, and -- aren't they both  
16 demonstratives?

17           **MR. CHOU:** Well, in addition, not to mix the issues,  
18 Your Honor, the Defense has notified us they plan to move the  
19 vast majority of their slides into evidence as exhibits rather  
20 than just demonstratives.

21           We'd, of course, oppose that across-the-board as well.  
22 You can't use an expert as a backdoor to get in otherwise  
23 inadmissible evidence.

24           **THE COURT:** Right.

25           **MR. CHOU:** But leaving that aside, we would move to

## PROCEEDINGS

1 exclude wholesale any reliance on this late-disclosed document,  
2 which would necessarily include the demonstrative or exhibit  
3 that's based on that -- on that doc.

4 **THE COURT:** All right. Mr. Stefan?

5 **MR. STEFAN:** So, first, with respect to the document,  
6 like Mr. Chou mentioned, it's, I think, 18 pages, but we're not  
7 attempting to introduce the entirety of that document. The  
8 piece that we're introducing -- and if we could pass this up.  
9 The piece that we're introducing is just on this page, which  
10 is -- and I can grab you a separate copy, if you want.

11 **MR. CHOU:** No, I got it. Thanks.

12 **MR. STEFAN:** Okay. It's on page 22 of what's been  
13 marked as 3395. This is just a snippet of the Word document in  
14 question, two snippets really, the date at the top and then the  
15 deployed private IPs at the bottom.

16 And this is just essentially introduced because these  
17 deployed private IPs associated with this document on this date  
18 are found within the source code that Mr. --

19 **THE COURT:** Where is this thing coming from? What is  
20 this? What is it? I mean, I don't --

21 **MR. STEFAN:** Well, I mean --

22 **THE COURT:** Documents -- you're talking about why  
23 you'd like to have this in there. That's lovely. What I don't  
24 understand is I'm being handed documents that appear to have  
25 been -- I don't know what they are. What are they?

## PROCEEDINGS

1           **MR. STEFAN:** So the document that Mr. Chou provided to  
2 you, which is what was given to the Government last night, is  
3 an overview, a CrossVerify overview of this piece of technology  
4 that was made by Terence Poon and by -- well, at least edited  
5 by Terence Poon and certainly, yeah, worked on by Mr. Andrade  
6 as well from 2017. And it essentially just accounts for the  
7 CrossVerify project.

8           This was --

9           **THE COURT:** What is -- you're calling an expert  
10 witness. What is this? Is this something he is purporting to  
11 rely upon? Is this --

12           **MR. STEFAN:** This is a document -- yes, Your Honor.  
13 This is a document that he is relying upon in part for his  
14 testimony. And when I say "in part" --

15           **THE COURT:** Then why wasn't it turned over long ago  
16 when he was designated? What are you doing? What are you  
17 doing? The night before, a new document -- I mean, we've had  
18 fights about exhibits that are to be used that otherwise were  
19 produced and they get designated late and we have a kerfuffle  
20 about that, but this is stuff they've never seen. What is --

21           **MR. STEFAN:** Well --

22           **THE COURT:** Why is it coming across the transom at  
23 this point in time?

24           **MR. STEFAN:** To be clear, Your Honor, they have seen  
25 it. I put on their desk --

## PROCEEDINGS

1           **THE COURT:** When?

2           **MR. STEFAN:** -- this morning a copy -- one of the many  
3 versions of this document that they've seized over time from  
4 Mr. Andrade and which bear Government Bates stamps.

5           **THE COURT:** Which one? Which one of these was seized?

6           **MR. STEFAN:** Well, the one there in your right hand,  
7 Your Honor. If you look down at the bottom left side of it,  
8 you know, it bears a --

9           **THE COURT:** Bates stamp.

10          **MR. STEFAN:** -- a Bates stamp.

11          **THE COURT:** Okay. So is this -- let me go back to  
12 Mr. Chou.

13           Is this a document the Government's had for a while?

14          **MR. CHOU:** Well, Your Honor, that's the first time  
15 I've heard of that Bates stamp. I'm sure if we went back and  
16 checked our massive database, perhaps it would appear somewhere  
17 in there.

18           But the ultimate truth of the matter is, this was never  
19 noticed as a basis for Mr. Min's opinion until 4:07 p.m. last  
20 night. We've had no ability to vet its authenticity. It  
21 raises the same sort of issues that the Government raised with  
22 respect to the 16.5 million lines of source code dumped on us  
23 about two and a half weeks before trial.

24           I mean, in our view, this is just a repeat practice by  
25 this particular Defense expert, or at least the Defense with



## PROCEEDINGS

1 respect to this expert, and it raises many concerns about the  
2 reliability and admissibility of his testimony.

3 **MR. STEFAN:** I mean, the Government could speak to  
4 this, but Ms. Chiu's disclosures, or at least demonstratives,  
5 were amended multiple times prior to her introduction,  
6 including the day before her presentation.

7 And this document in particular, again, has been in  
8 the Government's possession for some time. We wouldn't  
9 normally have --

10 **THE COURT:** This document is one, not this one. Has  
11 this been in their possession for a long time?

12 **MR. STEFAN:** No, Your Honor. Many -- many parts of  
13 it --

14 **THE COURT:** Be precise about it, then. Don't start  
15 making sweeping statements.

16 Maybe one has been in their possession. This one nobody  
17 is suggesting was in there possession.

18 **MR. STEFAN:** Correct, Your Honor. The -- correct.  
19 This is --

20 **THE COURT:** So this one's out. I mean, this is -- I  
21 don't know what's going on here. I mean, this is not the way  
22 things are supposed to be done. And there are significant  
23 teams of lawyers on both sides in this case, and I don't  
24 understand why we are in this position.

25 Yes. Go ahead.

## PROCEEDINGS

1           **MR. STEFAN:** Your Honor, we -- last night -- we  
2 previously provided to the Government a demonstrative for  
3 Mr. Min. And, yes, some of the material within what we  
4 provided the Government yesterday wasn't within the original  
5 provision, but I believe that the original provision was  
6 actually probably something like double the length of what we  
7 gave them yesterday.

8           We significantly revised what we provided them because of  
9 the Court's ruling yesterday limiting Mr. Min's testimony to  
10 those areas that are strictly related to the 2017-2018 time  
11 frame. So we went back and --

12           **THE COURT:** Okay. So is it your representation to me  
13 that is -- and, again, which one are we talking about?

14           You are representing to me that one of these documents  
15 reflects adjustments that were made because of some rulings  
16 with respect to what was permissible and what wasn't.

17           Those things do happen, and I'll accept representations  
18 from counsel, but be careful that that is true. Because if  
19 you're telling me that, it will affect how I come out, and it  
20 better be right.

21           So, very simple question. We're talking now about  
22 Exhibit 3395. Are the changes in 3395 just adjustments based  
23 on the ruling that I gave with respect to the fact that in --  
24 we're not going to be able -- you're not going to be able to go  
25 into 2020 and whether or not the technology would ultimately

## PROCEEDINGS

1 have worked? Is that why there are changes in this document,  
2 or are there more than that?

3 **MR. STEFAN:** The primary reason for the changes --

4 **THE COURT:** Not the primary reason, Counsel.

5 You are standing here as counsel in this case. I'm asking  
6 you a very simple question, and you better tell me the truth.

7 **MR. STEFAN:** I --

8 **THE COURT:** Is the truth that the only changes in this  
9 document were the result of the order that I gave with respect  
10 to the timing? That's what I want to know.

11 **MR. STEFAN:** That would not be the case.

12 **THE COURT:** All right.

13 **MR. STEFAN:** I have --

14 **THE COURT:** This cannot be used. It may not be used.  
15 It's excluded.

16 Okay.

17 **MR. STEFAN:** Your Honor?

18 **THE COURT:** What?

19 **MR. STEFAN:** May the Defense use it as a demonstrative  
20 exhibit only for --

21 **THE COURT:** Yes.

22 **MR. STEFAN:** -- the Court?

23 **THE COURT:** You may use demonstrative exhibits. They  
24 should be turned over. They should be shared. But I will  
25 allow you to use this purely as a demonstrative, and you're not

## PROCEEDINGS

1 going to admit it into evidence.

2 **MR. STEFAN:** Understood, Your Honor.

3 **THE COURT:** Now, with respect to this one --

4 **MR. STEFAN:** Again, to be clear, Your Honor, we're not  
5 attempting to admit that into evidence. We provided this to  
6 the Government yesterday as another basis on which Mr. Min,  
7 you know, was informed regarding his opinions here today. And  
8 with what comes as presentation to the jury in the  
9 demonstrative, it's that one page that we showed to you.

10 **THE COURT:** That's not being admitted into evidence.

11 You can use these documents as demonstratives, point  
12 them -- if I otherwise allow the area of examination, but  
13 you're not -- none of these are being admitted into evidence.

14 **MR. CHOU:** Your Honor, may the Government request a  
15 further remedy?

16 **THE COURT:** What's the further remedy?

17 **MR. CHOU:** As I understand it, and as counsel has  
18 confirmed, the basis of Mr. Min's opinion is going to depend in  
19 part, he's going to opine on this document that was disclosed  
20 last night at 4 o'clock; and it includes, on this particular  
21 demonstrative now, statements from Nigel Quantick,  
22 IP addresses, a date from November 2017.

23 The Government's request is that that particular opinion  
24 and this demonstrative be excluded in its entirety.

25 **THE COURT:** What is his opinion in particular?

## PROCEEDINGS

1           **MR. CHOU:** Well, it's hard for the Government to  
2 fathom because we just received this last night at 4 o'clock;  
3 but at a minimum, Mr. Min will be talking about this slide,  
4 which includes a discussion of --

5           **THE COURT:** What opinion is Min going to offer with  
6 respect to this page?

7           **MR. STEFAN:** With respect to that page, the  
8 IP addresses listed there correspond with IP addresses which  
9 are provided for the blockchain integration of the CrossVerify  
10 product around the same time frame, 2017-2018, that we would  
11 expect those entries to have been made into the database.

12           So essentially --

13           **THE COURT:** That's a fact statement. What is his  
14 opinion? What is it that -- what's the relevance of that item  
15 to his opinion, and what is the opinion?

16           **MR. STEFAN:** That the CrossVerify product was in  
17 development and was integrated with the blockchain in  
18 2017-2018.

19           **THE COURT:** And he will testify that he relied on this  
20 information to support the notion that it was in development?

21           **MR. STEFAN:** In part. It corroborates his opinion  
22 that it was in development.

23           Your Honor, I --

24           **THE COURT:** The expert -- okay. All right.

25           Okay. Well, he can testify that amongst the things he's

## PROCEEDINGS

1 relying upon is this, although it should have been -- if  
2 it's simply a demonstrative, it's one thing. If it's a piece  
3 of material that he's relying upon for his opinion, it should  
4 have gone over to them before.

5 **MR. STEFAN:** Yes, understood, Your Honor. When  
6 the Court issued its --

7 **THE COURT:** This has nothing to do with the thing that  
8 I talked -- that you said was the basis for adjustments. That  
9 has to do with 2020. This doesn't have anything to do with  
10 that; right?

11 **MR. STEFAN:** I mean, overall, that would be correct.

12 **THE COURT:** Overall, that would be correct. Counsel,  
13 come on. I'm asking you simple questions, and you ought to be  
14 giving me straightforward, simple answers, not dissembling  
15 about what's going on here. Understood?

16 **MR. STEFAN:** Understood.

17 **THE COURT:** Okay. So this has absolutely nothing to  
18 do with the rulings that I gave yesterday about 2020.

19 So why wasn't that provided to the Government if it was  
20 going to be a basis for Mr. Min's expert testimony?

21 **MR. STEFAN:** It was not identified until yesterday.  
22 The only --

23 **THE COURT:** Why, is my question. Why? Inadvertence?  
24 What was it? You're working hard? I mean, I understand all  
25 that but --

## PROCEEDINGS

1           **MR. STEFAN:** It was an -- it was an oversight,  
2 Your Honor. I mean --

3           **THE COURT:** Okay. Well, you should have told me that  
4 right at the beginning instead of this, "Oh, no, we've  
5 refashioned this to accommodate Your Honor's ruling," which is  
6 not apparently what happened.

7           **MR. STEFAN:** Well, to be clear, Your Honor, that is  
8 what happened, at least in part, and with respect to the  
9 demonstrative in particular.

10           I am in very clear conscience about the representations  
11 I've made to the Court today about all the documents we've  
12 presented to you.

13           **THE COURT:** All right. Go through again with me,  
14 Mr. Chou, what it is the Government's requesting.

15           **MR. CHOU:** The Government's requesting, at a minimum,  
16 that we strike this slide and prevent Mr. Min from opining or  
17 otherwise testifying about --

18           **THE COURT:** And your reason for that is what?

19           **MR. CHOU:** And the reason for that is that we were not  
20 notified that this was a basis or a foundation for Mr. Min's  
21 testimony until last night -- or last afternoon at 4:07 p.m.;  
22 and under Rule 16 and the Court's orders, that is a very late  
23 expert disclosure.

24           **THE COURT:** Okay. You're not using that page. Okay?

25           **MR. STEFAN:** Yes, Your Honor.

## PROCEEDINGS

1           **THE COURT:** Good.

2           **MR. CHOU:** Thank you.

3           **THE COURT:** Anything else?

4           **MR. HIGSMITH:** Yes. The Defense wants to call  
5 special agents to impeach the testimony of Government  
6 witnesses, and I think that should be excluded. I think it's  
7 not a -- it's not permissible. It's not -- it's cumulative.  
8 It's collateral. It should be prevented.

9           **THE COURT:** What's the issue that they want to --

10          **MR. HIGSMITH:** I was informed -- they want me to  
11 stipulate -- they wanted me to stipulate that -- I'm not sure  
12 because I didn't get a draft stipulation; but they want me to  
13 stipulate that, if called, an agent would say that one of  
14 the Government witnesses told that agent something. So what  
15 they want to do -- I have not stipulated to that for various  
16 reasons. But what they want to do is call those agents to say,  
17 "In the past, that Government witness told me X; but on the  
18 stand, they said they didn't remember."

19          So numerous times --

20          **THE COURT:** Well, you should have impeached the  
21 witness when the witness was on the stand. I'm not going to  
22 let you call an extrinsic witness to impeach somebody that's  
23 already testified.

24          **MR. SHEPARD:** Your Honor, I'll submit you a  
25 Ninth Circuit case on this.



## PROCEEDINGS

1 If the witness is asked "Didn't you tell the FBI X" and  
2 the witness either says "No, I didn't," which is maybe one or  
3 two of these but mostly they are "I don't recall," if the  
4 witness says either "I didn't tell the FBI that" or "I don't  
5 recall whether I told the FBI that," the Ninth Circuit says --

6 **THE COURT:** I'll read the --

7 **MR. SHEPARD:** -- we are entitled to prove that --

8 **THE COURT:** -- opinion because that sounds to me like  
9 you're trying to impeach with extrinsic evidence, which is not  
10 generally allowed.

11 So if you've got some Ninth Circuit case, I will of course  
12 follow what the Ninth Circuit says; but sometimes when people  
13 say they have a Ninth Circuit case and I look at it, it doesn't  
14 exactly stand for --

15 **MR. SHEPARD:** Fair enough.

16 **THE COURT:** -- the proposition that they are saying it  
17 does, but I will take a look at it.

18 **MR. SHEPARD:** Okay. We will submit the case to you.

19 **THE COURT:** Okay.

20 **MR. HIGHSMITH:** In my view, that's also collateral;  
21 therefore, prohibited, because the -- helpfully, they provided  
22 me with a list of the statements, which was very helpful. But  
23 my position is these are all collateral issues; therefore, out;  
24 and also cumulative because we also have definitively in their  
25 testimony "I don't remember."

## PROCEEDINGS

1           **THE COURT:** When is this -- so when are these -- if  
2 they were to be called, when would they be called?

3           **MR. SHEPARD:** Whenever we get this resolved. We  
4 can -- we have plenty of witnesses, I expect, for today.

5           **THE COURT:** Okay. So I can look at this Ninth Circuit  
6 opinion at the end of the trial day?

7           **MR. SHEPARD:** I expect so, yes. It's always hard to  
8 predict. We're hoping to get through our witnesses today, but  
9 it's hard to predict. I would -- my best expectation for  
10 the Court is that we will consume the day with Mr. Min and  
11 Dr. Armstrong.

12           **THE COURT:** Okay. With respect to this case you want  
13 me to see, at this stage just give me the case.

14           **MR. SHEPARD:** Yes.

15           **THE COURT:** I mean, I don't need a brief. I don't --

16           **MR. SHEPARD:** Understood.

17           **THE COURT:** And give it to the Government.

18           **MR. SHEPARD:** Yes.

19           **THE COURT:** If they've got a Ninth Circuit case, they  
20 can give me that one. So...

21           **MR. SHEPARD:** We'll do that.

22           **THE COURT:** Okay.

23                   (Recess taken at 8:29 a.m.)

24                   (Proceedings resumed at 8:37 a.m.)

25                   (Proceedings were heard out of the presence of the jury.)

**MIN - DIRECT / STEFAN**

1           **THE COURT:** Okay?

2           (Proceedings were heard in the presence of the jury.)

3           **THE COURT:** The jury is present.

4           Defense will call?

5           **MR. STEFAN:** The defense calls Mr. Erik Min.

6           **THE COURT:** All right. If you could come forward,  
7 please, to the stand to be sworn.

8           (Witness enters the courtroom and steps forward to be sworn.)

9                           **ERIK MIN,**

10          called as a witness for the Defendant, having been duly sworn,  
11 testified as follows:

12          **THE WITNESS:** I do.

13          **THE COURTROOM DEPUTY:** Please be seated.

14          Can you state your name and spell your last name, please.

15          **THE WITNESS:** Yes. It's Erik Min, M-i-n; Erik,  
16 E-r-i-k.

17                           **DIRECT EXAMINATION**

18          **BY MR. STEFAN:**

19          **Q.** Good morning, Mr. Min.

20          **A.** Good morning.

21          **Q.** I want to first have you introduce yourself a bit.

22          What is your occupation, Mr. Min?

23          **A.** Yes. I'm a senior director within FTI Consulting's  
24 blockchain and digital assets practice.

25          **Q.** And what do you do in your role with -- as an expert with

1 FTI?

2 **A.** Yes. I work in a digital forensics capacity. I perform  
3 investigations into disputes with regards to cryptocurrencies  
4 and blockchain investigation analysis, an assortment of  
5 different type of investigations.

6 **Q.** Apart from investigations, do you do other work with FTI?

7 **A.** Yes, I do. I work in an advisory capacity, you know, for  
8 blockchain native and crypto native companies, performing an  
9 assortment of different types of technical operational  
10 assessments for those companies, you know, reviewing protocols,  
11 procedures, looking at their source code, you know,  
12 understanding their footprint, and limiting their risk.

13 **Q.** Just generally, what does the work of someone in your  
14 capacity entail when it comes to blockchain cryptocurrency and  
15 analysis of source code?

16 **A.** Yeah. So, you know, we would obviously want to obtain the  
17 relevant information, you know, from the sources of the code,  
18 analyze them, review them, look for aspects of metadata, look  
19 for aspects of the code itself, look at the functions and  
20 features within the applications in the source code to  
21 formulate an opinion, essentially.

22 **Q.** How long have you been doing this kind of work?

23 **A.** For digital forensics, generally speaking, over 20 years  
24 my career, I've been performing that type of investigation.

25 You know, specifically within the blockchain and

1 cryptocurrency space, six years.

2 **Q.** And what is your company FTI Consulting?

3 **A.** Yeah. FTI Consulting is a global consultancy firm.

4 You know, we're publicly traded. Offices in over 30 countries.

5 Our segments vary from our technology segment, which hosts  
6 our blockchain digital assets practice. You know, our  
7 corporate finance group performs forensic accounting from our  
8 forensic litigation consulting practice. You know, various  
9 different segments covering multiple aspects of businesses.

10 **Q.** So is the advisory group that you're a part of just a  
11 portion of FTI's work?

12 **A.** Yes.

13 **Q.** What are some of FTI's clients? Who does FTI serve?

14 **A.** Banks, internal investigations, you know, crypto natives,  
15 some of the largest exchanges in the cryptocurrency space as  
16 well. Excuse me. It varies, yes.

17 **Q.** And I'm sorry, but you've used the term "crypto natives" a  
18 couple of times. I just want to ask you what that is.

19 **A.** Yeah. A crypto native would fall into the aspect of what  
20 Mr. Andrade's project with the AML BitCoin application was  
21 looking to accomplish, you know, being a crypto native company,  
22 servicing the industry, you know, applying some sort of, you  
23 know, application to better the industry.

24 **Q.** I want to talk about your education and background a  
25 little bit.

1 Do you have a -- what's your educational background?

2 Could you describe it?

3 **A.** Yeah. I have a Bachelor's of Science from Virginia  
4 Tech -- Virginia Polytechnic Institute and State University.

5 **Q.** Do you have any certifications that are relevant to your  
6 work in digital forensics?

7 **A.** Yes, I do.

8 **Q.** Can you describe some of those?

9 **A.** Yes. I have the -- from the Blockchain Council, I'm a  
10 certified Bitcoin expert, a certified blockchain developer, and  
11 a certified blockchain expert.

12 **Q.** What was generally entailed in getting those  
13 certifications?

14 **A.** For those specifically, we had, you know, a course of  
15 training, usually taking several days to complete the training,  
16 additional study, of which then conducting an examination to  
17 obtain the certification and credential.

18 I also have several, you know, additional  
19 forensic-specific certifications. I have the TRM Certified  
20 Investigator, which is a digital asset tracing tool for  
21 blockchain analytics.

22 In addition to the TRM Certified Investigator, I have the  
23 Crystal Research and Investigation certification. I also have  
24 the EnCase Certified Examiner.

25 **Q.** What is EnCase?

MIN - DIRECT / STEFAN

1 A. EnCase is a leading digital forensics tool for performing  
2 forensic analysis.

3 Q. How did you get that certification?

4 A. Yes. That certification is a lengthy, you know, study  
5 period to learn the different aspects of, you know, evidence  
6 handling, forensic analysis of various data sources, of which,  
7 upon taking the test, which was quite extensive, you know, you  
8 obtain the certification. And that's a three-year renewal  
9 process. I have held that certification since 2012. To  
10 continue to renew, it requires, you know, continuing  
11 professional education credits, CPEs.

12 Q. You talked about how you'd been at FTI for six years,  
13 I believe?

14 A. Yes.

15 Q. Prior to working with FTI, can you describe your  
16 employment history?

17 A. Yes. Prior to FTI, I was with Grant Thornton, which is an  
18 audit -- tax audit and advisory firm, similar to the Big Four.  
19 They're actually Number 5 on the list of audit firms, audit and  
20 accounting firms. I was with them from twenty- -- 2015 to  
21 2019 -- sorry, it's been a bit for that one -- performing an  
22 assortment of digital forensic investigation, e-discovery  
23 services with Grant Thornton.

24 Prior to that, I was with Granite Legal Systems from 2012  
25 to 2015, similar capacity: digital forensics, forensic

1 collection, e-discovery services.

2 Prior to Granite Legal, I was with HSSK Forensics with --  
3 you know, from the time period of 2009 to 2015, I believe.

4 Yeah.

5 Q. What kind of work were you doing with those firms? Was it  
6 similar to what you're doing with FTI now?

7 A. Yes. More so in the digital forensic capacity.

8 Q. Are you part of any professional associations associated  
9 with your practice as well?

10 A. Yes. Association of Certified Fraud Examiners and the  
11 Global Blockchain Association.

12 Q. And during the course of your career, about how many  
13 investigations have you participated in or consulted on as a  
14 digital forensics expert?

15 A. Yeah. Over the course of my 20-year career, I'd say,  
16 you know, in the ballpark of 4- to 500 investigations.

17 Q. And about how many of those investigations were specific  
18 to blockchain and cryptocurrency?

19 A. Yeah. I'd ballpark that around 80 over the course of the  
20 last six years.

21 Q. Have you ever been previously qualified in court to  
22 testify as a digital forensics expert?

23 A. Yes, I have.

24 Q. How many times?

25 A. Once.



## MIN - DIRECT / STEFAN

1 Q. Apart from testimony in court, have you provided forensic  
2 reports or affidavits, materials for use in litigation?

3 A. Yes, I have.

4 Q. How many times do you think you've done that?

5 A. Twice for expert reports. Various affidavits, I can't  
6 recall off the top of my head, but, yeah, over the course of my  
7 career, many affidavits.

8 MR. STEFAN: Your Honor, at this time the defense  
9 moves to enter -- have recognized Mr. Min as an expert in  
10 digital forensics, blockchain, and cryptocurrency.

11 MR. CHOU: Reserving objection at this time.

12 THE COURT: Do you wish to voir dire at this point?

13 MR. CHOU: Not at this point, Your Honor.

14 THE COURT: All right. Well, I will so designate the  
15 witness.

16 Go ahead.

17 MR. STEFAN: Thank you, Your Honor.

18 Can we show just to the witness Exhibit 3395.

19 Q. Do you recognize what I've shown to you?

20 A. Yes, I do.

21 Q. Is this the first page of a demonstrative that you  
22 prepared for your testimony today?

23 A. Yes, I did.

24 Q. Do the contents of the demonstrative generally reflect the  
25 material that you reviewed in preparation for your testimony?

MIN - DIRECT / STEFAN

1 A. Yes.

2 Q. And the opinions and findings that you have made with  
3 respect to your review of the evidence in this case?

4 A. Yes.

5 Q. Is it a fair and accurate summary of those findings and  
6 opinions and the material that you reviewed?

7 A. Yeah. Yes, it is.

8 MR. STEFAN: Your Honor, the Government -- or, pardon  
9 me -- the defense would seek to publish Exhibit 3395 as a  
10 demonstrative exhibit to the jury or seek to enter 3395 as a  
11 demonstrative exhibit.

12 MR. CHOU: No objection except for that one slide.

13 MR. STEFAN: Yes, Your Honor.

14 THE COURT: You may use the -- you may use the  
15 document as a demonstrative so the jury can look at it as  
16 you're inquiring.

17 MR. STEFAN: Thank you, Your Honor.

18 Let's go ahead and please publish Slide 1.

19 Q. So, Mr. Min, I want to start with the overall findings  
20 that you made with respect to the review that you performed in  
21 this case.

22 Did you perform a review of the source code for Aten Coin  
23 and the AML BitCoin projects, specifically with AML BitCoin,  
24 the material related to CrossVerify?

25 A. Yes, I did.

1 Q. Did you form opinions regarding them to a reasonable  
2 degree of certainty?

3 A. Yes, I did.

4 Q. And what was your overall finding with respect to the  
5 Aten Coin project that you reviewed?

6 A. Yeah. With regards to Aten Coin, you know, a complex  
7 project, an abundant amount of source code associated with the  
8 project, very detailed information, you know, specific to the  
9 project and how to manage the development process. You know,  
10 specific aspects to how to develop the code itself were  
11 prevalent.

12 The application appeared to be -- at least the portions of  
13 the application were complete and in need of essential,  
14 you know, building to compile the total application.

15 Q. Did it appear to be a functional product that relied on  
16 third-party ID verification software?

17 A. Yes, it did.

18 Q. With respect to the AML BitCoin or CrossVerify product,  
19 what findings did you make with respect to the progress in its  
20 development over the 2017 and 2018 time frame?

21 A. Yes. It was apparent that there was quite a bit of  
22 development and testing that occurred across that time period  
23 of 2015 to 2017.

24 Q. And with respect to the final state of that CrossVerify  
25 product, what's your opinion regarding its capacity to get

1 integrated into a preexisting cryptocurrency in the 2017-2018  
2 time frame?

3 **A.** Yes. It was there as far as the ability to get it  
4 integrated and functional.

5 **Q.** I want to turn, then, to how you reached each one of these  
6 findings; but first, I want to talk about cryptocurrency and  
7 blockchain more generally.

8 What do we mean by the term "blockchain"?

9 **A.** Yes. Blockchain is a decentralized ledger technology for  
10 purposes of recording transactions.

11 **Q.** How does a blockchain work?

12 **A.** Essentially, the decentralized ledger will record a  
13 transaction that is validated, you know, by validators on the  
14 blockchain, you know, for purposes of validating that  
15 transaction, of which then it is recorded to the blockchain in  
16 an immutable fashion, you know, for purpose of record.

17 **Q.** Could you try to put in more layperson terms what a  
18 decentralized -- pardon me. I already forget the term that you  
19 used. Decentralized ledger --

20 **A.** Correct.

21 **Q.** -- I believe you said.

22 **A.** Yeah. Decentralized in that it's -- there's no central  
23 body governing the blockchain and how it's recording.

24 It would be a situation where you would have numerous  
25 nodes or, you know, essentially, you know, operators of the

1 blockchain that are responsible for maintaining that copy. And  
2 those validators and those nodes, essentially, are in the  
3 purposes of confirming that everyone has the exact same copy.  
4 But none of them have the overall control, and, you know, they  
5 are leveraged across those nodes, you know, to manage and  
6 protect and secure the blockchain.

7 **Q.** What are some of the benefits of this technology?

8 **A.** Yeah. As mentioned, decentralization for governance.  
9 You know, the transparency of the transaction. It's immutable,  
10 meaning it cannot be changed from the record. The overall  
11 transactions are visible, you know, through the blockchain  
12 explorers for visibility for audit purposes and review.

13 **Q.** What is a cryptocurrency?

14 **A.** Yeah. A cryptocurrency would be a digital asset, a token  
15 that is essentially transacted on the blockchain.

16 **THE COURT:** You really do need to slow down.

17 **THE WITNESS:** Yes, sir. It is very complex. I do  
18 apologize.

19 The -- a cryptocurrency is the digital asset that will be  
20 transacted on a blockchain and stored those transactions. So  
21 when you conduct a transaction, if it be, you know, an actual  
22 currency for purposes of making a purchase of something, say a  
23 pizza or other services, that actual transaction would be  
24 recorded.

25 There's other aspects to blockchain technologies in the

1 form of supply chain management. You could use those  
2 applications to validate aspects of, say, that same pizza.  
3 You know, hey, the pizza was made at the restaurant. Confirm  
4 this aspect. It then is validated to the next step, of which  
5 then that aspect would be the delivery driver picks up the  
6 pizza. And it's to continue to be recorded throughout the  
7 process and validated.

8 **Q.** Is the idea, then, that anyone can go back and look to see  
9 how the process played out?

10 **A.** Yes, sir.

11 **Q.** When you -- how does a person possess a cryptocurrency?

12 **A.** Yeah. The possession is really through the private keys  
13 of --

14 **Q.** Slow down a little bit, if you would.

15 **A.** Sure.

16 The possession would be through the private keys of the  
17 wallet that is transacting the cryptocurrencies. So you would  
18 need a wallet for the purposes of holding the cryptocurrency  
19 keys and managing those assets for purposes of transacting  
20 those assets.

21 **Q.** And how would the person holding it in the wallet then  
22 transact using the blockchain?

23 **A.** Right. By authenticating through their wallet. You would  
24 take -- you would then have access to those private keys and  
25 have the control to then perform those transactions, you know,

1 through the wallet functions: send, receive, et cetera.

2 Right?

3 Q. How many cryptocurrencies are there?

4 A. Thousands.

5 Q. And at a thousand-foot level, what do you need to put  
6 together to make a cryptocurrency?

7 A. Yeah. You would need the overall technology of the  
8 blockchain. You would need, you know, a wallet application for  
9 purposes of managing those assets. You would need an  
10 ID verification process, you know, to confirm the holder of  
11 those assets, to perform the transactions, essentially, yes.

12 Q. I want to turn to the Aten Coin project first. Did you  
13 perform an analysis of the Aten Coin cryptocurrency?

14 A. Yes, I did.

15 Q. I want to talk about what materials you relied upon for  
16 your analysis.

17 What materials were the basis for your conclusions in this  
18 case?

19 A. Yeah. For the Aten Coin project, an assortment of copies  
20 of the Aten Coin source code were provided for review and  
21 analysis, of which, you know, reviewed those. You know, they  
22 contained, you know, the various source code, the different  
23 aspects of the documentation that was prevalent within the  
24 repositories to perform the analysis.

25 Q. I want to talk about the primary copies or sets of source

MIN - DIRECT / STEFAN

1 code that informed your investigation.

2 Were there some primary ones that informed your  
3 investigation?

4 A. Yes, there were.

5 Q. Which are you referring to?

6 A. There was one particular, the Aten Coin -- Aten Black Gold  
7 Coin multisig wallet. I believe it was dated in April of  
8 2020 -- 2015. Excuse me.

9 Q. And what was the format of that file?

10 A. It was in a zip format.

11 Q. What did you understand the origin of the zip file to be?

12 A. It was originated from an email from a developer,  
13 Terence Poon, of which it was sent to another one of the  
14 development teams -- team members in 2015.

15 Q. Who did you understand Terence Poon to be?

16 A. A developer on the project.

17 Q. On the Aten Coin project?

18 A. Yes, sir.

19 Q. And how did you receive that source code?

20 A. King & Spalding gave me access to the code.

21 Q. When you reviewed the metadata for the source code or the  
22 files containing the source code, what did that reflect?

23 A. Date-modified timestamps of 2015.

24 Q. And what does "date-modified timestamp" mean?

25 A. Yeah. Date modified would be a metadata timestamp that's



MIN - DIRECT / STEFAN

1 associated with a file, a folder to show the last time it had  
2 been changed. An effective change, not an access point, but  
3 essentially changed of the document.

4 Q. What did that timestamp of 2015 indicate to you with  
5 respect to the zip file that you reviewed with the Aten Coin  
6 source code?

7 A. Yeah. With the source code being last modified written  
8 within the 2015 time period, that the code had been, you know,  
9 modified and edited within 2015.

10 Q. Was there another zip file that you also relied on?

11 A. Yes, there was.

12 Q. And what did you understand the origin of that zip file to  
13 be?

14 A. Yeah. That zip file was provided to King & Spalding  
15 shortly after a conversation that I was a part of with the  
16 King & Spalding team, with the developer, Terence Poon, of  
17 which following that conversation in January of 2025, it was  
18 essentially provided to King & Spalding and then shared with  
19 me.

20 Q. And by "King & Spalding," I assume you're referring to  
21 myself and my fellow cohorts at defense counsel table?

22 A. Yes, that's right.

23 Q. Did you review the date-modified information with respect  
24 to that zip file as well?

25 A. Yes, I did.

1 Q. And what did that information reflect?

2 A. Again, last modified, last written time stamps of 2015.

3 Q. And did that indicate to you that this was source code  
4 originally created or at least zipped up into that format in  
5 the 2015 time frame that it was dated?

6 A. Yes, that's correct.

7 Q. Those sets of source codes on which you relied, did you  
8 view them as a reliable basis on which to form your opinions?

9 A. Yes.

10 Q. And was that material that was given to you and you relied  
11 on, is that the kind of material typically relied on by digital  
12 forensics experts and cryptocurrency and blockchain experts in  
13 performing their analysis?

14 A. Yes. Yes, it is.

15 Q. And is the manner that you received and verified the  
16 source of the information for those zip files consistent with  
17 the standards in your field as well?

18 A. Yes.

19 Q. You mentioned that you had a conversation with  
20 Terence Poon. Was there any other developer you spoke with?

21 A. Yes. Sergey Petkevich.

22 Q. Did your conversation with them actually form a basis for  
23 your opinions as presented here?

24 A. No, unfortunately, it did not.

25 Q. Oh, why is that?

MIN - DIRECT / STEFAN

1 A. It was a short conversation. It was very high level. It  
2 did not get into the technical specifications that I would have  
3 preferred to have in that conversation.

4 Q. Were there difficulties in obtaining conversations with  
5 the software developers who worked on this project previously?

6 A. Yes.

7 Q. I want to talk then about what you -- what you did  
8 discover with respect to the Aten Coin source code that you  
9 reviewed.

10 First, based on your review of the source code, what is  
11 your perspective on whether the Aten Coin was a working product  
12 in the 2014-2015 time frame from which the source code -- the  
13 source code derived?

14 A. Yeah. The various aspects and packages were there. Very  
15 much, you know, it was -- you know, each of those were working,  
16 you know, functional applications.

17 Q. So the applications that you reviewed for the Aten Coin  
18 source code appeared to be functional?

19 A. Yes.

20 Q. Just overall, understanding that Aten Coin was a  
21 cryptocurrency, could you describe the features that you  
22 observed regarding the Aten Coin?

23 A. Yes. Aten Coin, you know, had an aspect of ID -- user  
24 identification and verification. It would take, you know, KYC  
25 information, for instance, for the user, which "know your

1 customer" is what KYC would stand for with this regard. And it  
2 would take that and perform a validation of that KYC  
3 information against a third-party software vendor for  
4 confirming that identity.

5 Q. Did it have a wallet application?

6 A. Yes, it did.

7 Q. And could you describe any features specific to that  
8 wallet application?

9 A. Yes. The wallet, obviously, being a cryptocurrency, it  
10 operated on a blockchain for purposes of recording  
11 transactions. It had, you know, log-in capabilities, that ID  
12 verification aspect discussed with the third-party vendor, of  
13 which all of that's integrated onto the blockchain.

14 Q. And when you speak of the blockchain, what kind of  
15 blockchain did the Aten Coin have?

16 A. It was a forked copy of the Bitcoin blockchain.

17 Q. Can you describe to the jury what that means, "forked copy  
18 of the Bitcoin blockchain"?

19 A. Right. A forked copy would be, you know, taking the  
20 Bitcoin blockchain application code, which is open source, and  
21 taking that copy, making that your base for the code that you  
22 would then develop your application.

23 So in this case, the team took Bitcoin core, stored that  
24 within their Git repositories, and then began making their  
25 changes to that code to effectively make it their own version

MIN - DIRECT / STEFAN

1 with their own functions and features, you know, that they're  
2 including, the biometric functions -- excuse me -- the  
3 ID verification process.

4 Q. Is the Bitcoin core an open-source material?

5 A. Yes, Bitcoin's an open source.

6 Q. Can you describe to the jury what that means?

7 A. Yeah. Open source is an aspect of the development  
8 ecosystem. Right? So contributing to the environment,  
9 contributing to code, bettering the code, making it openly  
10 available to educated, you know, developers for the purposes of  
11 refining the code, using it for their own purposes, you know,  
12 building excellent and wonderful, you know, new projects.

13 Q. So is an open-source code something that is available to  
14 anyone to use?

15 A. Yes, sir.

16 Q. Okay. How common is it for cryptocurrencies to be made by  
17 forking the Bitcoin blockchain?

18 A. Regularly. Very common.

19 Q. I believe you briefly touched on this already, but with  
20 respect to the wallet, did you identify something called an  
21 identity-linked credential that was specific to the Aten Coin  
22 wallet?

23 A. Yes, I did. ILCA for short.

24 Q. Can you describe --

25 A. ILCA, I-L-C-A.

1 Q. I apologize. I interrupted you.

2 Can you describe to the jury what that feature was?

3 A. Yes. The ILCA for short, identity-linked credential  
4 authentication was a purpose of validating a user's identity.

5 In performing that, you would, you know, perform the  
6 validation through this third-party, you know, software, the  
7 ID verification vendor, of which once the validation is  
8 confirmed, the Aten Coin gateway would confirm a security  
9 token, this credential, of which that credential, you know,  
10 once validated, would essentially give the gateway the ability  
11 to effectively co-sign a transaction in a sort of multisig  
12 function capability.

13 Q. Would you describe this, then, as a multisignature wallet,  
14 the Aten Coin wallet?

15 A. Yes.

16 Q. You used the term "gateway" a couple times. I just want  
17 to see if you can provide to the jury any clarity on what you  
18 were referring to --

19 A. Yeah.

20 Q. -- with respect to the gateway.

21 A. Yes. By "gateway" here in this context, I'm referring to  
22 what the Aten Coin project was referring to the Aten Coin  
23 gateway. Essentially, it's, you know, the overarching sort of  
24 brain, so to speak, of the Aten Coin project, you know, which  
25 it's managing the different functions; it's integrating the

1 different aspects of the wallet, which is where the user is  
2 interacting with this. It's communicating those ID aspects,  
3 identity verification aspects. It's communicating with the  
4 third-party servers that are doing the ID verification itself.  
5 It's interacting and making that verification for purposes of  
6 validating those transactions.

7 **Q.** And you indicated your view showed some use of third-party  
8 ID verification softwares?

9 **A.** Yes.

10 **Q.** Can you expand on what you observed with respect to that?

11 **A.** Yeah. Within the code was found a third-party vendor  
12 called Mii Card -- M-i-i, Card, C-a-r-d -- and that application  
13 was the third-party tool that would perform the ID verification  
14 process.

15 **Q.** I want to talk about some of the challenges that you faced  
16 in reviewing the Aten Coin material.

17 What challenges were presented to you in your review?

18 **A.** Yeah. Aten Coin specifically did not have any of the  
19 commit history that you would expect to be available from a  
20 Git repository data pool.

21 **Q.** So I'll go ahead and pause you right there.

22 You mentioned commit history and a GitHub repository data  
23 pool. Can you describe what you were referring to?

24 **A.** Yeah. So Git is a -- is a -- is essentially an  
25 application that programmers and development teams will utilize

1 to manage the development of their applications, their code  
2 development. Essentially, it's change management for software.

3 And when you're leveraging a Git repository, the  
4 developers will pull down a local copy from, you know, the  
5 centralized, let's just call it, cloud that is Git. In this  
6 case, it's Bitbucket is the -- is the tooling that is  
7 supporting the Git repository. There's multiple ones. There's  
8 GitHub as well. That's another version. But, in this case,  
9 Bitbucket is what I'll be referring to. And, you know, with  
10 this Bitbucket, Git repositories will manage the overall  
11 development and workflow.

12 So in the example where a developer pulls down the data  
13 for, you know, the source code to perform their review and  
14 analysis and make changes, say they wanted to add a feature,  
15 they'll make their changes, of which then they'll push those --  
16 that code change to Git -- in this case, Bitbucket -- for  
17 purposes of recording that change.

18 The developer's metadata as far as that developer's name,  
19 the timestamp of when that commit was generated and recorded  
20 will be registered there.

21 The developers also have the ability to leave a message,  
22 you know, to drop a note, essentially, to, you know, give an  
23 indication of what it was that was performed.

24 **Q.** So that's a whole lot of information that you're  
25 indicating was not present with respect to the Aten Coin



MIN - DIRECT / STEFAN

1 material that you reviewed?

2 A. That's correct.

3 Q. Would you have an understanding of why that is?

4 A. I would say it's a ten-year-old project. You know, being  
5 the source code that I reviewed had timestamps from 2015 of  
6 their changes, I would say it's -- it's common to have any sort  
7 of, you know, version-control issues with something that old.  
8 If you didn't have access to the specific Git repository that  
9 was maintaining that source code, you wouldn't be able to  
10 easily just extract it out as a clone copy to provide, say, to  
11 me in this case.

12 So if you had static files saved on, say, an external hard  
13 drive somewhere or on your workstation, your laptop, and that's  
14 just what you have, then that essentially is what could be  
15 provided. And that's what looks to be the case in the  
16 instances of these two files, the zip files that I received to  
17 review.

18 Q. In that they were essentially -- they weren't from the  
19 original -- well, I don't know. Just go ahead and describe  
20 what you mean by that.

21 A. Yeah.

22 Q. What was the case with the two files?

23 A. It wasn't in a direct export from Git, and Bitbucket  
24 specifically for the AML BitCoin project, but, you know, native  
25 files stored locally.

1 Q. How did that affect your ability to analyze the data?

2 A. Well, with the commit history, you would love to see that  
3 to actually tell when development had occurred. As I  
4 mentioned, Git is essentially change management for software.

5 So if you're seeing development over time, you would want  
6 to review the Git history -- the commit history -- excuse me --  
7 to review the changes, see what was done, see the exact changes  
8 that occurred, the time when those occurred, and any of those  
9 notes that I mentioned to give an indication to what was being  
10 performed and the purposes thereof.

11 Q. Were there other difficulties that the lapse of time from  
12 2014, 2015 to your present review, were there other  
13 difficulties associated with that?

14 A. Yes. I'd say in addition to the time period, you know,  
15 there was a technical aspect that would be of issue with the  
16 overall time that had passed. You know, for instance,  
17 you know, you're constantly getting a -- you know, Apple wants  
18 you to update your phone. Right? There's always an update  
19 that is being occurred. So if you're talking about ten years  
20 of updates that occurred to, say, a mobile device that you're  
21 using, you would need to stay up-to-date and current.

22 So there's many, many, many versions that would have  
23 changed over time. And the versions that we have are from  
24 2015. So if you were thinking of a project that continued to  
25 run from 2015 to current, there would be reasonably, you know,

1 a fair amount of versions that you would have in place.

2       There's also the overall, you know, hardware aspect in  
3 addition to the software that is problematic in reviewing code  
4 this old. You know, our MacBooks our Windows computers,  
5 you know, they're modern; they're up-to-date. You're dealing  
6 with a software that was essentially built on preexisting  
7 versions of those pieces of hardware and software.

8 **Q.** So are there difficulties trying to run 2014 or 2015  
9 source code or software on equipment that's ten years newer  
10 than that?

11 **A.** Yes, there is.

12 **Q.** Could you describe that with respect to your work on  
13 Aten Coin?

14 **A.** Right. So, I mean, there's nothing I can really do about  
15 getting a Windows computer, a Mac computer that's, you know,  
16 that -- presumably, you could find an old, you know, version of  
17 it and blow it back; and that's essentially what we had to do  
18 in some cases, you know, for reviewing the aspects of the code,  
19 spinning up aspects of the code. You have the version control  
20 as far as -- so the software that was utilized for the purposes  
21 of development.

22       In addition to, you know, the aspects of running it  
23 itself, you're using different software development tools that  
24 essentially are outdated. So to get them to work in the state  
25 that they were at the time, you would want to actually have to

MIN - DIRECT / STEFAN

1 implement those versions for the purposes of the analysis.

2 **MR. STEFAN:** Could we show Slide 2, please, or the  
3 next slide of the demonstrative.

4 Next, please.

5 **Q.** What is -- what is being displayed here?

6 **A.** Yeah. These were the various, you know, pieces of  
7 software that were found to be utilized at the time of  
8 development for the code itself.

9 **Q.** And why have you listed these here? What does this  
10 illustrate?

11 **A.** It illustrates the dated nature of the code utilized.  
12 You know, it's 2025, and we're talking about code here that was  
13 released well over ten years ago.

14 **Q.** What kind of difficulties does the use of this old  
15 development software pose for you when trying to get the  
16 software up and running in the current era?

17 **A.** Yeah. Rebuilding it in a form that we can actually  
18 compile the code to, you know, generate the executables and  
19 actually run the software; and that is, you know, the  
20 AML BitCoin Wallet -- sorry -- the Aten Coin wallet.

21 **Q.** How do you think your situation would have changed had you  
22 been performing this review in 2016 or 2017 as opposed to 2024  
23 and 2025?

24 **A.** Well, the discussed in the hardware and the software,  
25 you know, version issues would be alleviated. You'd have

## MIN - DIRECT / STEFAN

1 access to those versions. You know, for instance, the ones  
2 here on the screen would be relatively current, not  
3 out-of-date, and we'd have access to those in a ready fashion.

4 We'd also have access, you know, to the development team  
5 for purposes of asking questions, having sessions to review the  
6 code, understand the architecture of the code, get into,  
7 you know, the back end and understand all those different  
8 functions and what they're doing.

9 **Q.** Okay. Despite those limitations, were you able to perform  
10 an effective review of the source code for Aten Coin?

11 **A.** Yes.

12 **Q.** And overall, what did your review of the source code tell  
13 you about the Aten Coin project developers, the people working  
14 on the software?

15 **A.** Yeah. The development team was quite sophisticated, very  
16 well organized. They took good care to make sure that they  
17 documented the aspects of how they wanted the project run and  
18 how the commit analysis would be -- sorry -- the commit history  
19 would be recorded, how the code would be reviewed, changed,  
20 et cetera, for purposes of making those commits to the -- to  
21 the ultimate, you know, Git repository for change management.

22 **Q.** What kind of source code was used in this development?

23 **A.** C++.

24 **Q.** What does that tell you about the project?

25 **A.** Yeah. C++ is a sophisticated programming language. It's

MIN - DIRECT / STEFAN

1 not for the average user. You need education and training to  
2 actually perform, you know, the actual coding functions. It's  
3 not necessarily a run-of-the-mill code base you just get  
4 started with.

5 **MR. STEFAN:** Can we please show the next piece of the  
6 demonstrative.

7 **Q.** What are we looking at here, Mr. Min?

8 **A.** This is a nice note from the development team, likely the  
9 leadership of the team -- the development team, indicating  
10 exactly how they want the code developed.

11 Obviously, I don't need to read it to you; but  
12 essentially, you know, taking the different aspects from,  
13 you know, the actual Git repository, performing those edits,  
14 and how they want those commits submitted to the Git repository  
15 and how they are ultimately reviewed, you know, to the extent  
16 that, you know, it's a well-documented plan and direction to  
17 the development team for purposes of making edits to the code.

18 **MR. STEFAN:** And can we advance to the next piece of  
19 the demonstrative, please.

20 **Q.** What is reflected here?

21 **A.** Yeah. Another good example of good instruction, you know,  
22 within the code files that we found in the supporting  
23 documentation for the code. This is a read me QT file, which  
24 would indicate the aspects of developing the front end of the  
25 application. So the user face that you see; so, in this case

1 of the wallet application, the flow of what it looks like, the  
2 things that make, you know, the user enjoy the product. Right?  
3 It doesn't have the intricacies of the back end. This is more  
4 focused on the user experience and the UI, meaning the user  
5 interface.

6 **MR. STEFAN:** And we can advance to the next piece of  
7 the demonstrative.

8 **Q.** Is this another example of instructions being provided by  
9 the developers to people using the source code?

10 **A.** Yes, it is. You can see from the notation of Aten Black  
11 Gold Coin, the QT indicates, obviously, more of the same,  
12 you know, front-end UI development.

13 **Q.** Were you able to utilize the instructions provided to you  
14 within the source code to some effect?

15 **A.** Yes, I did. Yeah, we did, in fact, use these for purposes  
16 of building the application and spinning it up to run.

17 **Q.** And when you say "the application," what exactly did you  
18 spin up to run?

19 **A.** The wallet application, the Black Gold Coin -- Aten Black  
20 Gold Coin wallet.

21 **Q.** I want to talk about what you saw with respect to that  
22 wallet.

23 Did the wallet that you Git spun up, did it have the  
24 relevant portions of a cryptocurrency wallet that you would  
25 expect?

MIN - DIRECT / STEFAN

1     **A.**    Yes, it did.

2     **Q.**    What are you referring to specifically?

3     **A.**    Yeah.  It had the functionality to log into the wallet,  
4     you know, performing the ID verification aspects.

5            Once validated through obtaining that credential, as  
6     mentioned before with the ILCA credential, you could then  
7     perform transactions.

8            You had the ability to be vetted for AML compliance, which  
9     is anti-money laundering, to spell it out for you -- excuse  
10    me -- and essentially perform those transactions.  And you  
11    could send assets to anyone you liked if you had, you know,  
12    their cryptocurrency address.

13           **MR. STEFAN:**  Can we advance to the next slide of the  
14    demonstrative, please.

15    **Q.**    What is depicted here?

16    **A.**    Yeah.  This is the Aten Black Gold Coin wallet that I  
17    managed to spin up.  The -- you can see the functionality.  
18    You know, it looks like most other wallets in the case that you  
19    have an overarching dashboard, you know, the different aspects,  
20    which we'll get into in further examples.

21            But, yeah, the neat and interesting one that I want to  
22    call out here for this one is in the left slide under the file,  
23    it has the aspect you sign a message, which is a neat feature  
24    for cryptocurrency wallets, to where if you send a transaction,  
25    you know -- to use an example that we've carried here, if I



1 wanted to send, you know, cryptocurrency, Aten Coins to someone  
2 for supply -- you know, delivering me a pizza, I could say on  
3 there, you know, "Thanks for the pizza. You know, enjoy the  
4 tip." Right?

5 So it's a situation where this function here allows you to  
6 sign, you know, actually interact yourself with the blockchain,  
7 in addition to the transaction that you're conducting, to write  
8 a note and have it stored on the blockchain.

9 **Q.** All right. we can advance to the next slide of the  
10 demonstrative.

11 **A.** So let's stay on the left side again, the help window. I  
12 mean, expected with any software, you would want to have a help  
13 window. That essentially gives you the ability to, you know,  
14 learn about the specific versioning of the software, understand  
15 what the application is and does. If you have, you know,  
16 errors or come across issues with the code, you can submit a  
17 debug, you know, function to report a bug or a problem, as it's  
18 called, you know, within the, you know, coding space --  
19 application space.

20 **Q.** And how about, on the right-hand side, there's an option  
21 to encrypt the wallet. Would that be something that you'd  
22 expect of a cryptocurrency wallet?

23 **A.** Yes, I would. Yeah. Encryption is important for  
24 cryptography in general. And essentially, this would help  
25 secure your wallet and assure that only your -- only you would

## MIN - DIRECT / STEFAN

1 have access to that wallet.

2 **MR. STEFAN:** We can advance to the next demonstrative  
3 slide, please.

4 **THE WITNESS:** So this is a good example here as far as  
5 on the left pane, we have receive. Here, it's just showing,  
6 you know, the ability to -- you know, to receive, you know,  
7 currency.

8 You know, with any wallet, you would want to be able to  
9 send and receive tokens. So with a receipt, you would --  
10 excuse me -- generate an address from your wallet that's unique  
11 to your cryptocurrency wallet. It would then populate within a  
12 further below item in your address book. You would share that  
13 address with, you know, the pizza driver -- well, actually,  
14 that's for receipts. Excuse me.

15 So if you wanted to send someone assets, you would  
16 provide -- apologies.

17 If you wanted to receive assets, you would provide one of  
18 your receiving addresses, of which then, you know, the sender  
19 on the other end would then put your address into the form  
20 within the wallet and essentially send you whatever the amount  
21 of currency was that they wanted to send you.

22 **MR. STEFAN:** I think we can advance to Slide 10,  
23 please. And zoom in on the information on the right-hand side  
24 in the "Pay to," "Label," and "Amount."

25 **Q.** Is this what you were referring to? I know it's pretty

1 fuzzy in this screenshot.

2 **A.** Yeah, it is. So "Pay to" would be that address that  
3 you're going to send assets to. The "Label" would be a  
4 notation that you would include within, you know, your wallet  
5 application. This would not necessarily be stored to the  
6 blockchain itself. However, in the example of the pizza, this  
7 would be, "Hey, pizza for Friday night for the kids." Right?  
8 So you can make a note so you can understand, if you ever  
9 wanted to look back at your transactions, to understand what it  
10 is that you had done before.

11 You see this commonly in most traditional financial  
12 institutions through Fiat banking as well.

13 **Q.** And then, finally, Slide 11.

14 **A.** Yeah. So this is just the UI interface to show -- I mean,  
15 as you can see, this wallet is out of sync, as you can see on  
16 the left. You know, being an application from 2015, the  
17 blockchain itself is not live. So, essentially, we could  
18 not -- I could not sync that application, you know, to the  
19 blockchain. So that's why it shows out of sync.

20 If the application was -- the blockchain was live and we  
21 had synced it to that blockchain, then I would have been able  
22 to see that I was synced and I was ready to confirm  
23 transactions on the blockchain. Essentially, you need to be  
24 able to have a synced version of the blockchain to be able to  
25 conduct those transactions and see those transactions in a

1 clear state.

2 **Q.** To be clear, how did you come to have all of these  
3 screenshots?

4 **A.** Sure, which, as discussed, it's a really complicated  
5 process of obtaining, you know, prior versions of the software  
6 to utilize. We took -- I took the Linux -- a prior version of  
7 Linux from 2015 to make an image, of which -- I'll try to keep  
8 this high level so it's not too complicated for you-all -- but  
9 take that operating system in Linux and then use compilers to  
10 generate the executable for -- from 2015 using dated, old  
11 versions from 2015 to do that; you know, using the same  
12 instructions that, you know, were provided that you saw before  
13 about how to build these packages; and essentially compile that  
14 into an executable and then spin up the application to get to  
15 this point of review.

16 **Q.** So, essentially, you built this application out using the  
17 source code that was provided to you?

18 **A.** Yeah, using the source code. And the notations were very  
19 helpful in getting to this point.

20 **MR. STEFAN:** I want to advance to the next slide,  
21 please.

22 **Q.** And discuss what we are viewing here. First, this green  
23 and colored text on the black background, what is this?

24 **A.** Yeah. It looks like a copyright notation for 2014 Aten  
25 Black -- Aten Coin Developers.

1 Q. And then just generally, this screenshot that we're  
2 viewing, what is it a screenshot of, just broadly speaking?

3 A. Sure.

4 Q. The text on the page --

5 A. Yeah. The -- sorry. Go ahead. Sorry.

6 Q. No. Go ahead.

7 A. I was going to say, the HTTPS gateways at the bottom,  
8 Gateway 1 and Gateway 2 for atenblackgoldcoin.org/API, those  
9 are gateway servers for making the connection between,  
10 you know, the actual wallet functions to that of the  
11 third-party verification service, ID verification service.

12 Q. So I guess, what would the function of these gateways be  
13 when a user is using their wallet or using the Aten Coin  
14 blockchain?

15 A. Yeah. You would need to be able to connect to them. So  
16 this allows that communication of information between the  
17 wallet application and the gateway servers, and, you know, the  
18 Aten Coin gateway, as is mentioned before. So communication  
19 between the two. This is essentially the connection, the road  
20 to get from one point to the other.

21 Q. Did you observe evidence of blockchain integration for the  
22 Aten Coin?

23 A. Yes, I did.

24 MR. STEFAN: Could we advance to the next slide,  
25 Slide 13.

MIN - DIRECT / STEFAN

1 Q. What is depicted here? What does this inform you of?

2 A. Yeah. This is code, source code from the Aten Black Gold  
3 Coin multisig repository reviewed. These are, you know, C++  
4 files indicating the aspect of an RPC call, which is a remote  
5 procedure call. That is for the purpose of making those  
6 connections to the blockchain for transmitting information back  
7 and forth.

8 Q. Would this indicate to you that there was blockchain  
9 integration?

10 A. Yes.

11 Q. Did you also -- I believe you spoke to it. Did you  
12 observe evidence that Aten Coin was utilizing third-party  
13 ID verification services?

14 A. Yes.

15 Q. What was --

16 MR. STEFAN: You know, let's advance to Slide 14,  
17 actually.

18 Q. What was the evidence that you saw of the integration of  
19 third-party ID verification services?

20 A. Yeah. As you'll see on line 21, the miicard\_verification.  
21 That's M-i-i Card, underscore, verification. Yeah. Within  
22 there, you see the aggregation of the account holder's first  
23 name, last name, which is then communicated to the Mii Card  
24 third-party tool to perform that ID check.

25 And then go to the next slide.

MIN - DIRECT / STEFAN

1 Q. Yeah, we can go to the next slide.

2 A. And of which you'll see in line 36 "data\_image Base  
3 Code 64" -- "Base64.encode." That would be an indication of a  
4 selfie. Base64 would be an image, as notated, data\_image.

5 Q. What did you understand Mii Card to be?

6 A. An ID verification service.

7 Q. Is this a third-party service?

8 A. Yes, sir.

9 Q. And what was your understanding of how that interacted  
10 with the Aten Coin wallets and blockchain?

11 A. So through those HTTP gateways, Mii Card would communicate  
12 with the Aten Coin gateway to transmit that information back  
13 and forth. So you would take a selfie. You would validate --  
14 that image would be validated against the information that  
15 Mii Card is holding to confirm the identity, which then it  
16 would return, you know, the approval, you know, the yes  
17 function to -- to advance that aspect to confirm the identity.

18 MR. STEFAN: Let's advance to Slide 15. Or, pardon  
19 me. We are at Slide 15. That's fine.

20 Q. Okay. So just overall, with respect to Aten Coin, based  
21 on your review, did it appear to have been a working product in  
22 the 2014-2015 time frame?

23 A. Yes.

24 Q. And was it integrated with the blockchain?

25 A. Yes.

1 Q. Did it have a multisignature wallet?

2 A. Yes.

3 Q. And did it appear to include ID verification of users?

4 A. Yes, it did.

5 Q. And so I want to turn now to the AML BitCoin and  
6 CrossVerify products.

7 Did you perform a review of source code related to those  
8 products as well?

9 A. Yes, I did.

10 Q. Generally, what was the AML BitCoin product intended to  
11 be?

12 A. Yeah. AML BitCoin was intended to be a product for a  
13 cryptocurrency that would leverage a wallet that would perform  
14 an ID verification process, you know, utilizing biometric  
15 functions to validate the identity of the user is who should be  
16 in control of that wallet.

17 Q. With respect to the AML BitCoin, what was the relationship  
18 between that and a software called CrossVerify?

19 A. Yeah. CrossFire -- CrossVerify was the actual application  
20 that would perform that ID verification and biometric function.

21 Q. Who, to your understanding, was responsible for the  
22 development of the CrossVerify technology or the administration  
23 of its development?

24 A. Yeah. The Aten Coin team.

25 MR. CHOU: Objection. Hearsay. Foundation.



1           **THE COURT:** Overruled.

2           **BY MR. STEFAN:**

3           **Q.** Pardon?

4           **A.** The Aten Coin development team.

5           Sorry. Apologies. AML Bitcoin development team.

6           We shifted gears now. Excuse me. Apologies.

7           **Q.** That's okay.

8           So I want to focus your testimony on the CrossVerify  
9 product. What was the intended purpose of CrossVerify?

10          **A.** To validate the user's identity.

11          **Q.** And what evidence did you review for your analysis of the  
12 CrossVerify product?

13          **A.** Yeah. Various source code files, database entries, the --  
14 the aspects that you would see that were available, were relied  
15 upon to understand the components and how they functioned,  
16 you know, for the purposes of the AML BitCoin Wallet.

17          **Q.** And just specifically, where did those sources come from?

18          **A.** The Bitbucket Git repositories provided for review.

19          **Q.** And I believe you previously described what a Bitbucket  
20 repository is; right?

21          **A.** Yes. It's a Git repository.

22          **Q.** How many repositories from the Bitbucket did you rely upon  
23 for CrossVerify?

24          **A.** I believe it was three.

25          **Q.** And that's out of a total of how many repositories that

1 existed?

2 A. Over 50. I think it was 58.

3 Q. So I want to talk about that briefly.

4 Was the CrossVerify portion of your review just a part of  
5 the total sum of evidence that you reviewed?

6 A. Yes. There was quite a bit to review across all the  
7 repositories.

8 Q. About how much data was in the total Bitbucket repository  
9 that you reviewed?

10 A. Nearly 16 1/2 million lines of code.

11 Q. Apart from the 16 1/2 million lines of code for the  
12 Bitbucket repositories, was there other information associated  
13 with AML BitCoin and CrossVerify that was available for your  
14 review?

15 A. I'm sorry. Repeat the question.

16 Q. Apart from the Bitbucket repository, were there other  
17 sources of potential evidence for Cross- -- CrossVerify and  
18 AML BitCoin products?

19 A. Yes, there was.

20 Q. What are you referring to?

21 A. AWS, Amazon Web Services.

22 Q. Were you able to review all of the material on AWS?

23 A. No, I was not.

24 Q. Why is that?

25 A. Yeah. Once -- it was a process to gain access to the

1 accounts. In discussions with the defendant, Mr. Andrade, we  
2 attempted to gain access to it.

3 Q. I'm sorry. I don't want to get too deep into discussions  
4 you may have had with Mr. Andrade.

5 Just generally, were you unable to use the server keys to  
6 open the accounts?

7 A. No, I could not.

8 Q. Was your understanding, with respect to that, that the  
9 subscription had expired for the accounts?

10 A. That's correct.

11 Q. And did you speak with any developers regarding the  
12 AML BitCoin and CrossVerify products?

13 A. Yeah. The same meeting with Terence Poon and Sergey  
14 Petkevich.

15 Q. Was that a basis for reaching of your conclusions today?

16 A. No, it was not.

17 Q. Same reasons you provided before? Just a short,  
18 high-level conversation?

19 A. Yes, that's correct.

20 Excuse me.

21 Q. How did you get the access to the Bitbucket repository  
22 that you used to analyze the CrossVerify evidence?

23 A. Yes. Through working with the King & Spalding team,  
24 Mr. Andrade provided his credentials to the Bitbucket accounts,  
25 of which were shared with me, which gave me access to review

1 the account.

2 Q. Did provision by Mr. Andrade of the access to the account  
3 cause you any sort of concerns about the veracity of the  
4 material in that account?

5 A. No, it did not.

6 Q. Why wouldn't it cause you any concerns?

7 A. Because it's a Bitbucket, you know, Git repository. Its  
8 purpose is to track changes to the repository. If changes were  
9 made, the account would notate that.

10 Q. Would this make it quite difficult to change any files in  
11 the account without creating an entry that would alert you --

12 A. That's correct.

13 Q. -- to that fact?

14 A. Yeah.

15 Q. Is it fair to say that the Bitbucket repositories cannot  
16 be easily manipulated?

17 A. Yes, that's correct.

18 Q. And are the Bitbucket repositories that you reviewed in  
19 this case of a type that are commonly relied upon in analysis  
20 of experts in a similar position to you?

21 A. Yes.

22 Q. I want to talk about what was in the Git -- Bitbucket  
23 repositories for CrossVerify.

24 What did you review in those repositories with respect to  
25 the CrossVerify product?

1   **A.**   Yeah. The code that was associated with the CrossVerify  
2   product, associated documentation and logging, more  
3   importantly, some of the databases associated with the  
4   CrossVerify application specifically. Yeah, that's -- that's  
5   essentially in a nutshell what it was, yeah. Apologies.

6   **Q.**   That's all right.

7           How would you characterize the quality of the source code  
8   that you reviewed for the CrossVerify product?

9   **A.**   Loosely documented; no real, you know, architecture  
10   detailed; no clear instruction, as previously, you know,  
11   articulated within the Aten Coin project, for instance.  
12   Essentially, just, you know, the aspects of the code and no  
13   real clear map of how to get from Point A to Point B.

14   **Q.**   Did this pose difficulty for you in your -- in your  
15   analysis?

16   **A.**   It did.

17   **Q.**   What did this speak to you regarding the overall  
18   management of the development for CrossVerify?

19   **A.**   I'd say that it was poorly managed, you know; no real, you  
20   know, control in various aspects of the code; not very clearly  
21   articulated for purposes of guidance to the development team.

22   **Q.**   Did you observe involvement of different development teams  
23   on the product over the course of different time periods?

24   **A.**   Yes, I did. At least two.

25   **Q.**   What is your understanding of how that can affect the

MIN - DIRECT / STEFAN

1 development of a code?

2 **A.** Yeah. It's just with any given team, if you pick up a  
3 project, you're working with existing code; you're making that  
4 your own; you're making your own changes as you see fit. And  
5 as you change to an additional team, it's the same situation.

6 **Q.** Are you familiar with the NuGen company or team?

7 **A.** Yes.

8 **Q.** And with the -- another team, the DTN or London team with  
9 respect to this --

10 **A.** Yes.

11 **Q.** -- development?

12 Did it appear to you that there were issues in the  
13 interactions between those two teams with respect to the  
14 development?

15 **A.** Yes, there was.

16 **Q.** I want to talk about what you saw in the Bitbucket  
17 repository and, specifically, any limitations that you had in  
18 reviewing those materials.

19 What limitations, if any, did you encounter?

20 **A.** Yes. The -- in review of the Bitbucket repository for  
21 Git, the commit history began in the end of 2018. In review of  
22 the commits and the lines of code that were committed, it's  
23 clear that there was an abundant amount of work that had  
24 occurred at that point.

25 Well, prior to that point, as having that much code and

MIN - DIRECT / STEFAN

1 that much development, you know, to continue at the tail end of  
2 2018 into 2019, it would be indicative of a considerable amount  
3 of work performed prior to that that you would have expected to  
4 see within the Git repository which was not available, which  
5 would lead me to believe that there would have been an  
6 additional Git repository containing code that was being  
7 managed by that separate -- that separate Git repository.

8 Q. Okay. I want to kind of go back over just a little bit  
9 what you just said.

10 You mentioned the commits; right?

11 A. Yes.

12 Q. And just to reiterate, the commits are people making  
13 changes or adding code to the repository, and that gets  
14 recorded; is that right?

15 A. Yes, the development team.

16 Q. So with respect to the Bitbucket repository, what's the  
17 first commit that you observed in the repositories?

18 A. One that occurred in 2018.

19 Q. And do you recall the month?

20 A. It was in November.

21 Q. You're indicating you believe that there was actually  
22 development reflected in those commits that was performed prior  
23 to that date; right?

24 A. Yes.

25 Q. And so with respect to those initial commits that were

MIN - DIRECT / STEFAN

1 made in November, say, or December, what is it about those  
2 commits that indicate to you that there was development prior  
3 to those commitment points?

4 **A.** Yeah. Just the abundant volume of data within the lines  
5 of code that were committed thereafter would imply that you had  
6 additional components of that Git repository. There's  
7 databases, you know, specifically, you know, that reference  
8 information and testing that occurred as early as 2017.

9 So with that, I mean, you can safely form a conclusion  
10 that, you know, there would have had to have been some sort of  
11 development process in place to record that activity and those  
12 changes. So seeing, you know, these various observed  
13 timestamps throughout the code files themselves, along with  
14 those database entries, you would expect to have seen  
15 additional work that just wasn't there.

16 **Q.** And I believe you stated that with respect to that, this  
17 told you something about the existence of a prior GitHub or  
18 Bitbucket or some other repository.

19 Can you just rearticulate what it was that indicated to  
20 you that some prior repository had existed?

21 **A.** The volume. Yeah, the volume of code. The -- you would  
22 have expected -- if this was a brand-new project, you would  
23 expect to see a gradual increase in the amount of commits in  
24 the line -- in the aspects of how much code was committed to  
25 the repository. It just wasn't seen here.



MIN - DIRECT / STEFAN

1           It was very much a hard -- a whole lot of commit -- a  
2 whole lot of data all of a sudden, which does not support,  
3 you know, the current standings of that being the only  
4 repository.

5   **Q.**   When you say "a whole lot of data all of a sudden," can  
6 you quantify that?

7   **A.**   I think the first month or so was easy. You know, a  
8 million commits -- excuse me -- a million lines of commits --  
9 apologies -- a million lines of code changes across, I believe  
10 it was, ten commits between November and December.

11 **Q.**   Would that be an abnormal number of code changes, given  
12 the number of commits and the time period?

13 **A.**   Yes.

14 **Q.**   Apart from that, you had mentioned indication within the  
15 data itself that the development had been occurring prior to  
16 the commitment point in November of 2018. What was it in the  
17 data that indicated that to you?

18 **A.**   Predominantly, a database associated with the CrossVerify  
19 application. There's two, essentially, that were heavy within,  
20 you know, the actual line items of data where a recorded  
21 timestamp was as early as April of 2017.

22 **Q.**   About how many timestamps did you observe that were  
23 prior -- that were prior to November of 2018?

24 **A.**   Yeah. It was over 4,000 -- 40,000.

25 **Q.**   40,000?

MIN - DIRECT / STEFAN

1   **A.**   40,000, yes, correct. Over 40,000 line items, you know,  
2   within those databases.

3   **Q.**   Based on those entries, were you able to kind of come up  
4   with an understanding of the timeline of the development of the  
5   CrossVerify project between 2017 and 2018?

6   **A.**   Yes. With the database timestamps being a great indicator  
7   to testing of the application and its functionality, you also  
8   had numerous observed timestamps within the source code itself.  
9   You know, as noted before, as you see with code, you have the  
10   ability to drop notes for yourself. Developers on the project  
11   would regularly send a note or provide a note within the code  
12   indicating what they were doing and the time frame that they  
13   had done it.

14   **Q.**   Was there evidence within the code that you reviewed that  
15   the CrossVerify product had gone through testing?

16   **A.**   Yes.

17   **Q.**   What was it that indicated that to you?

18   **A.**   Yeah. The same database, you know, showed a considerable  
19   amount of testing specific to the biometric function for  
20   CrossVerify, which leveraged the biometric functionality of a  
21   facial recognition score as well as an iris recognition score.

22   **Q.**   I want to talk about some of the specific timestamps that  
23   you observed within the evidence that informed your opinion.

24           **MR. STEFAN:** Can we advance to the next slide.

25   **Q.**   What is it that's depicted here?

MIN - DIRECT / STEFAN

1 A. Yeah. These are various code files found within the  
2 AML BitCoin Bitbucket repository reflecting observed time -- it  
3 that shows the observed timestamp that was seen, some of these  
4 being programmatic functions created by the applications that  
5 were developing the software -- I'm sorry -- developing the  
6 code.

7 Q. I'm sorry. I'm just going to pause you for one second.

8 A. Sure.

9 Q. What's a programmatic function?

10 A. Yeah. So through the software development, you know,  
11 application, you would have something that occurred. You know,  
12 you'd do a change. You'd do something that ultimately triggers  
13 the software to generate a timestamp.

14 Q. In other words, these would be automated timestamps within  
15 the source code that you --

16 A. Yes.

17 Q. -- reviewed?

18 I apologize. I interrupted you.

19 So these timestamps would be programmatic, you indicated?

20 A. Yes.

21 Q. What did this -- what did these timestamps tell you about  
22 the development of the technology in this time frame?

23 A. Yeah. The timestamps reflect that, you know, the  
24 development team was busy and active across the project. You  
25 have timestamps that are reflecting, I believe, as early as --

MIN - DIRECT / STEFAN

1 I believe it was April of twenty- -- sorry -- yeah, April of  
2 2017, carrying through, I believe, May of 2018.

3 So a considerable amount of time, well over, you know, a  
4 year essentially, of development activity had occurred just by  
5 looking at these files alone.

6 **MR. STEFAN:** Can we move to the next slide, Slide 18.

7 **Q.** What did these images -- or what did these portions of the  
8 source code tell you about the development of the project?

9 **A.** Yeah. These are specific to the CrossVerify demo  
10 repository within the Bitbucket Git repositories. These are  
11 notes from the development team adding aspects of what they  
12 were doing, what they wanted to communicate as far as record  
13 within the code files themselves.

14 As you can see, we have activity as early as March of  
15 2017. We have aspects, you know, as late as April of 2018 in  
16 this case at the bottom here.

17 **MR. STEFAN:** Can we advance to the next slide.

18 **Q.** And what does this chart indicate to you?

19 **A.** Yeah. As noted in the top, you see [as read]:

20 "Crossverify-demo/CrossVerifyControllerDB.sql."

21 This is a SQL database of which records activity,  
22 you know, being conducted by the application.

23 With regard to this table, this is a -- the users table  
24 within that database. And what we have here are counts of when  
25 users were created within that database. If you look at the

MIN - DIRECT / STEFAN

1 time period, you've got roughly 30-ish or so entries in May of  
2 2017, then a large spike in June of 2017, which would indicate  
3 that that's likely a significant amount of testing.

4 So the development team is reviewing the aspects of what  
5 the application is doing, how it's recording information in  
6 these databases, all of which is important to the overall  
7 process. You need to, you know, take it for a test drive. And  
8 that's what the June timestamp there is indicating, is a high  
9 volume. Nearly 10,000 entries were recorded in that table for  
10 users being created within the table itself. Continued process  
11 of testing, you know, more at a -- probably likely a more  
12 average pace throughout July of 2017 to May of 2018.

13 **MR. STEFAN:** I should have done this earlier. Can we  
14 zoom in on the CrossVerify --

15 **Q.** Well, actually, I'll just draw your attention to up there  
16 in the top left corner [as read]:

17 "Crossverify-demo/CrossVerifyControllerDB.sql."

18 What is being shown here in each of these slides?

19 **A.** Yeah, the CrossVerify demo is reflective of the Bitbucket  
20 repository itself for that aspect of the repo- -- the  
21 repository. Excuse me. And the database is the underlying  
22 database file that stores this information that's depicted in  
23 the visual.

24 **Q.** So essentially, this is a file path, right --

25 **A.** Correct.

MIN - DIRECT / STEFAN

1 Q. -- that is shown?

2 A. Yes.

3 Q. Okay. So material that you accessed within the source  
4 code, this is the path for that material?

5 A. Yes, sir.

6 MR. STEFAN: We can advance to the next slide.

7 Q. Is this essentially more information indicating further  
8 testing that you were referring to?

9 A. Yes. Yes. Here we have, you know, the company  
10 invitations table, as you can see in the very top. That is the  
11 table within the database in the next line [as read]:

12 "crossverify-demo/CrossVerifyDB.sql."

13 Again, these are counts of company invitations, so sending  
14 out invitations to join the project, join the wallet and  
15 configure an account through the AML BitCoin, you know,  
16 verification process. So these are reflective of those  
17 invitations.

18 And as you can see, we have a fair amount of activity and  
19 testing in April; you know, a considerable amount in June of  
20 2017, well over 5,000 or so; and continued testing throughout  
21 the year into May of 2018.

22 Q. In the course of your review, did you observe evidence  
23 that the CrossVerify product was integrated with the  
24 blockchain?

25 A. Yes, I did.

1           **MR. STEFAN:** Can we advance to the next slide, please.

2           **Q.** What is it that this source code excerpt shows you about  
3 blockchain integration?

4           **A.** Yeah. Here you have, you know, a configuration for  
5 blockchain notes for, you know, what's called a database dump  
6 of data from a database, the results of that database, and  
7 what's found to the blockchain for purposes of recording that  
8 information to the blockchain.

9           So what you have here on the left, as you can see --  
10 actually, it's probably better to call out where it says  
11 [as read]:

12                   "COPY public.blockchain\_nodes."

13           That, there, is indicating what we have here.

14           And then the next section of "(id, ip, port)" would be the  
15 underlying fields that are relevant within this entry.

16           And what we have are the IDs on the lower entry where 13,  
17 14, 15, 16, 17 would be those IDs; and then these numbers here  
18 to the right of those respective numbers are the IP addresses  
19 for the blockchain nodes themselves.

20           **MR. STEFAN:** Your Honor, may I have a brief moment?

21           **THE COURT:** You may.

22                   (Pause in proceedings.)

23           **MR. STEFAN:** Okay. We can advance to the next slide,  
24 please.

25           **Q.** And what is it that's relayed to you in this demonstrative

1 about the verification logs?

2 **A.** Yes. So the name here is highlighted in orange. You have  
3 "verification\_logs." That would be the underlying table within  
4 the database. And this is the creation of that table.

5 So what you have for the table "verification\_logs" would  
6 be the fields. You know, think about an Excel file in a way.  
7 The various fields and columns that you have within that Excel,  
8 which in this case is a database, you have the ID; a user ID  
9 that's specific to, you know, the individual user being  
10 onboarded; the face score for the facial recognition process;  
11 the iris score for the iris recognition process; the results of  
12 those tests; and the underlying metadata for, you know, those  
13 scores and when they were recorded to the database.

14 **Q.** Was this evidence to you that the CrossVerify product was  
15 working on integration of biometric verification with  
16 blockchain?

17 **A.** Yes, it does.

18 **MR. STEFAN:** Can we please advance to the next slide.

19 **Q.** What does this slide depict?

20 **A.** The results of that same database schema being configured  
21 and set up, of which you can see -- I like to call out for  
22 where it says "COPY public.verification\_logs," for that table,  
23 and to the right of that you have the relevant fields.

24 It's a little bit difficult to read. It's not as clean as  
25 a nice Excel file. But you have ID, again user ID, face score,



MIN - DIRECT / STEFAN

1 iris score, result, created at, and updated at, so the same  
2 fields discussed in the prior.

3 In the creation of the table, we have the underlying data  
4 for that table, what appears to be a significant amount of  
5 testing of the application of where you can see within the data  
6 itself are lines 1 through 19. In the example here in the  
7 demonstrative, you have, in the first line -- actually, let's  
8 go to one that actually shows some -- line 10.

9 So line 10 has user -- ID is 10; user ID, a value of 142.  
10 So, say, John Doe is associated with user ID 142. Then you  
11 have that user ID's -- that user, John Doe, in this example's  
12 face score, after performing the facial recognition aspect  
13 through the CrossVerify platform. That score will be -- result  
14 here. Then you have the same with the iris score and the  
15 results.

16 So in this case, we have the face score with the values,  
17 and then, essentially, we don't have one for the iris score in  
18 this case, but we do have a value of success listed as a  
19 successful authentication of the biometric data.

20 The resulting timestamps would indicate when the file  
21 was -- sorry -- the entry was created and updated, which,  
22 you know, by looking at the metadata timestamps, they are the  
23 same time. So that would be the first entry.

24 **MR. STEFAN:** Your Honor, I'm informed that we could  
25 use a break at this time if that would be acceptable to

1 the Court.

2 **THE COURT:** Okay. Members of the jury, we'll take our  
3 morning break. Remember my admonitions. Do not discuss this  
4 amongst yourselves or with anyone else.

5 And we'll come back in 15 minutes.

6 (Recess taken at 10:01 a.m.)

7 (Proceedings resumed at 10:23 a.m.)

8 (Proceedings were heard in the presence of the jury.)

9 **THE COURT:** The jury is present.

10 You may proceed.

11 **MR. STEFAN:** Thank you, Your Honor.

12 **Q.** Okay. Mr. Min, when we left off, you were explaining this  
13 verification log to the jury.

14 Does this -- what does this verification log tell you  
15 about the -- what work CrossVerify was doing in the field of  
16 biometric identification and integration with the blockchain?

17 **A.** Yeah. The tabled schema reflects the face score and the  
18 iris score field, of which in the database you have results of  
19 that scoring evident.

20 You know, as I mentioned with line 10, you do have a  
21 facial score for the purposes of testing, presumably, of which  
22 that entry was created in April of -- April 27th of 2017,  
23 1500 hours, and the net modified time is the exact same  
24 timestamp. So that would indicate it's the first entry for  
25 that user.

MIN - DIRECT / STEFAN

1 Q. Did you observe evidence that CrossVerify had the ability  
2 to also collect and store KYC data?

3 A. Yes, that's correct.

4 MR. STEFAN: Can we advance to the next slide, please.

5 Q. What is depicted in this slide?

6 A. Well, this slide would be, as you can see from the --  
7 excuse me -- the file pathing up at the top, "c\_2.0\_android,"  
8 that would be the actual Bitbucket repository -- Git repository  
9 that this file was taken from. As you can see, so that would  
10 be specific to an Android mobile device application.

11 You know, with that, you have the different entries within  
12 the view here. This would be aspects of configuring an image,  
13 which as you can see, "android:layout." A little bit below you  
14 see the face aspect for, you know, the configuration of that  
15 view of -- of the facial aspect of taking that picture.

16 And the record here indicates that that occurred in  
17 March -- March 7th of 2018 at 16:33 hours.

18 Q. Would this indicate to you that there was work on the  
19 Android application for the CrossVerify software in March of  
20 2018?

21 A. Yes, it would.

22 MR. STEFAN: And we can pause display of the  
23 demonstrative for the moment.

24 Q. Mr. Min, what do all these 2017 to 2018 timestamps tell  
25 you about what information was missing from the Bitbucket

1 repository that you got for AML BitCoin and CrossVerify?

2 **A.** I'm sorry. Rephrase the question.

3 **Q.** What do all these timestamps within the database tell you  
4 about what may have been missing from the Bitbucket repository  
5 that you received?

6 **A.** Yes. The database entries reflect a considerable amount  
7 of testing of the application and recording of those entries  
8 within the database.

9 With that, you would have expected to see the correlating  
10 aspects of developing the code. For instance, in line 10 where  
11 we have a facial recognition portion, you don't have the iris  
12 score; yet you get a success.

13 So the development process would be inherently to fix this  
14 bug, of which you would make a change. So you would have  
15 expected to see a change around April of 2017, around the time  
16 period of that entry being created to fix that issue.

17 All right?

18 And that would have been recorded within the  
19 Git repository, and it would have had a commit. There would  
20 have been a clear edit to the code that would have been visible  
21 within the Git repository reflecting, you know, who performed  
22 that change, when it was performed, and exactly what was  
23 changed in that line of code.

24 **Q.** So do you expect on that basis, then, for there to have  
25 been at some point a GitHub or Bitbucket or some other

MIN - DIRECT / STEFAN

1 repository that contained this information we're referring to  
2 from 2017 to 2018?

3 A. Yes, sir.

4 Q. Was any such GitHub or Bitbucket available to you for  
5 review?

6 A. No, sir.

7 Q. Overall, based on your review of the CrossVerify material,  
8 do you have an opinion regarding whether it would have been  
9 possible to integrate the CrossVerify technology you observed  
10 with a preexisting cryptocurrency source code?

11 A. Yes.

12 Q. What is your opinion on that?

13 A. Yeah. The aspects of the code for CrossVerify indicate  
14 that they had a working application or at least somewhat  
15 functional, close to being, you know, complete in development.

16 You know, with that completion, in integration with the  
17 wallet application itself, you would expect to see a  
18 functioning application that has those components, you know,  
19 combining the aspects of the CrossVerify aspect to validate a  
20 user, you know.

21 And taking a step back, the wallet application, verifying  
22 a user to authenticate to the platform, the wallet, that is, of  
23 which, as I mentioned, the CrossVerify component to confirm  
24 that biometric function for purposes of anti-money laundering  
25 techniques to confirm that identity is whom it's intended to

MIN - DIRECT / STEFAN

1 be, of which then you would integrate with the blockchain,  
2 you know, for the purposes of recording those transactions for  
3 immutability across the decentralized ledger that is  
4 blockchain.

5 **Q.** Do you have an estimation or could you provide an  
6 estimation of how much time you think it would take for a  
7 development team with the adequate resources to integrate the  
8 CrossVerify technology you observed in the source code with a  
9 preexisting cryptocurrency?

10 **MR. CHOU:** Objection. Vague, time period, from which  
11 point counsel is referring to.

12 **THE COURT:** Can you clarify your question.

13 **BY MR. STEFAN:**

14 **Q.** With respect to the CrossVerify technology, did you  
15 generally form an opinion about the status of its completion,  
16 given the total source code that you reviewed?

17 **MR. CHOU:** Objection. Prior court order on this  
18 issue.

19 **MR. STEFAN:** I'm -- Your Honor, I'm referring  
20 specifically to the CrossVerify technology.

21 **THE COURT:** I understand.

22 You can testify as to what state it was, what the  
23 technology was.

24 We're talking about twenty- -- what period of time?

25 **MR. STEFAN:** 2017 to 2018.

MIN - DIRECT / STEFAN

1           **THE COURT:** 2017 to 2018.

2           **THE WITNESS:** Yes, sir.

3           In my opinion, you know, within six to eight months, with  
4 a qualified development team, you could take the CrossVerify --

5           **THE COURT:** It's not what you're expecting will  
6 happen. It's what was the state of it at the time. How  
7 complete was it?

8           **THE WITNESS:** Yes. CrossVerify was near complete.

9           **THE COURT:** All right.

10          **BY MR. STEFAN:**

11          **Q.** And given that, how -- what is an estimation of how long  
12 it would take to integrate that technology with a preexisting  
13 cryptocurrency?

14          **A.** Yes. To complete and integrate, six to eight months would  
15 be an estimate.

16          **Q.** And overall, what's your opinion regarding the progress of  
17 work on the CrossVerify product between 2017 and 2018?

18          **A.** I'm sorry. Would you mind rephrasing the question?

19          **Q.** How would you characterize the development progress on the  
20 CrossVerify technology between 2017 and 2018?

21          **A.** Consistent. You see, you know, active testing. You see,  
22 you know, code to support the application and its overall  
23 integration at some point to the overall application of  
24 AML BitCoin Wallet.

25          **Q.** Did the developers writing the code appear to know what

## MIN - DIRECT / STEFAN

1 they were doing?

2 **A.** They did, yeah. The code is sufficient. It's a sound  
3 piece of code. It looks to be something that would work with  
4 the right amount of work and effort.

5 **Q.** You spoke earlier about issues with management and the  
6 project. Do you distinguish between those issues and the  
7 actual quality of the source code that you reviewed?

8 **A.** Not terribly so. I mean, it's a situation, I think, of,  
9 you know, you have these varying capacities of different teams  
10 working on this. You know, it obviously is going to contribute  
11 to the effectiveness of the overall project and the success.

12 You know, the code is there. It's not very clear, though,  
13 as far as the documentation, the overall architecture and how  
14 everything is supposed to work. So it's -- it's a bit vague as  
15 far as how sound the code is; but it does appear that with that  
16 amount of work, as I mentioned, roughly six to eight months,  
17 that it would be an effective product that could be easily  
18 integrated.

19 **MR. STEFAN:** Your Honor, may I have a moment?

20 **THE COURT:** Yes.

21 (Pause in proceedings.)

22 **MR. STEFAN:** Thank you, Mr. Min. I don't have any  
23 further questions.

24 **THE COURT:** Mr. Chou?

25 **MR. CHOU:** Your Honor, just as the defense had a break



1 to meet with their rebuttal witness as to Theresa Chiu, we  
2 would ask -- the Government would ask for a short break to meet  
3 with its rebuttal witness.

4 **THE COURT:** Okay. Well, we just had a break, but  
5 we'll -- how long are you requesting?

6 **MR. CHOU:** Would 15 minutes be fair, Your Honor?

7 **THE COURT:** Okay. We're going to do a double 15, but  
8 then we're going to hang in there for the rest of it.

9 So remember my admonitions not to discuss this amongst  
10 yourselves or with anyone else.

11 And I'll see you in 15 minutes.

12 (Recess taken at 10:35 a.m.)

13 (Proceedings resumed at 10:54 a.m.)

14 (Proceedings were heard in the presence of the jury.)

15 **THE COURT:** The jury is present.

16 Mr. Chou, cross-examination.

17 **CROSS-EXAMINATION**

18 **BY MR. CHOU:**

19 **Q.** Good morning, Mr. Min.

20 **A.** Good morning.

21 **Q.** I want to start with something that the defense didn't  
22 elicit from you on direct examination.

23 You're not testifying here for free; correct?

24 **A.** No, I'm not.

25 **Q.** And you bill hundreds of dollars an hour for your work in

1 this case; correct?

2 A. I do.

3 Q. Billing about \$250 an hour?

4 A. That is correct.

5 Q. And that \$250 an hour included the time you spent  
6 analyzing the source code?

7 A. Yes.

8 Q. Travel?

9 A. No.

10 Q. Travel's reimbursed?

11 A. It is.

12 Q. What about rehearsing your testimony? Is that billable?

13 A. Yes.

14 Q. Practicing for this cross-examination?

15 A. Yes.

16 Q. And testifying right now, is that part of your \$250 an  
17 hour rate?

18 A. Yes.

19 Q. So since this morning, you've billed about \$750 to this  
20 case?

21 A. I have to check the time, but sounds about right.

22 Q. Okay. And so all together, how much have you personally  
23 billed to this matter?

24 A. I have to check the invoices. I don't have those at hand.

25 I didn't do an analysis of the overall time spent to date on

1 the source code at this point.

2 Q. You're not sure how much time you've spent analyzing the  
3 code?

4 A. I mean, as an estimate, around a hundred hours.

5 Q. And that's you personally or FTI as a whole?

6 A. As a team, yes, FTI as a whole.

7 Q. FTI as a whole.

8 And how much do you think by the end of this case, just an  
9 estimate, FTI as a whole will bill for this case?

10 A. Without looking at it and performing an estimate off the  
11 cuff, I'd say 120 hours.

12 Q. Okay. So let's just say if we call it a hundred hours at  
13 \$250 an hour, that's about \$25,000, give or take?

14 A. Sounds like a fair estimate.

15 Q. And of those hours, personally, how much have you  
16 personally billed to the case as opposed to your FTI  
17 colleagues?

18 A. Roughly 50 percent or so. 40 to 50 percent, I'd say.

19 Q. Okay. So you've put in about 45 hours, and your  
20 colleagues who aren't here in the Court today put in about 55?

21 A. That'd be accurate.

22 Q. And is their rate also \$250 an hour?

23 A. Yes, they're listed at 250 an hour.

24 Q. You work at a company called FTI Consulting; correct?

25 A. Yes.

1 Q. And they're a consulting firm?

2 A. Yes.

3 Q. They provide these sort of expert witness services to  
4 people and companies who want to hire FTI; correct?

5 A. Yes. They hire us as experts.

6 Q. And in this case, the defendant, through their law firm  
7 King & Spalding, retained you; is that right?

8 A. Yes.

9 Q. And King & Spalding is a major international law firm.  
10 Fair to say?

11 A. Yes.

12 Q. They're a major -- major client and source of revenue for  
13 FTI Consulting; correct?

14 A. Yes, they are.

15 Q. And fair to say the relationship between FTI Consulting  
16 and King & Spalding is important to King & Spalding -- or,  
17 excuse me -- important to FTI Consulting?

18 A. On behalf of FTI, yes.

19 Q. Mr. Min, you have a LinkedIn profile; correct?

20 A. I do.

21 Q. And on that profile, you wrote that you enjoy playing  
22 utility infielder and enjoy grabbing whatever glove is needed  
23 to play and win; correct?

24 A. Yes.

25 Q. Let's talk about your qualifications.

1 Earlier you testified about a number of certifications and  
2 your education. Do you remember that?

3 A. Yes.

4 Q. Do you have any professional certifications in source code  
5 review or software development?

6 A. I do not.

7 Q. No certifications in source code review or software  
8 development?

9 A. I mean, other than my Blockchain Council, blockchain  
10 developer certification.

11 Q. Right. And let's talk about that.

12 So this is the certified blockchain developer  
13 certification you mentioned?

14 A. Yes.

15 Q. And that required only 15 hours of training; correct?

16 A. With the course training, specifically, roughly, two,  
17 three days, I believe, and then additional study in preparation  
18 for the examination.

19 Q. Right. It's a 15-hour course duration as advertised  
20 online. Is that fair to say?

21 A. That sounds about right.

22 Q. It's \$299; right?

23 A. Yes.

24 Q. And it's a self-paced access mode course?

25 A. Yes.

1 Q. And what programming languages, if any, were discussed in  
2 this 15-hour online course?

3 A. Solidity, different aspects of Ethereum, programming  
4 languages for blockchain development.

5 Q. So Solidity?

6 A. As primary, yes.

7 Q. Any other languages?

8 A. It touched on other aspects of C++, JSON-type aspects for  
9 SQL, Visual Studio. They're all reviewed at some level,  
10 degree.

11 Q. When you say "touched on" this in this 15-hour course, how  
12 much time was spent on C++?

13 A. I don't recall offhand.

14 Q. Okay. Did you -- did you write any lines of code in C++?

15 A. I did not.

16 Q. And Solidity, as you just testified, that's for an  
17 entirely different cryptocurrency called Ethereum; correct?

18 A. It is.

19 Q. That's different from what Bitcoin core is written in;  
20 correct?

21 A. Correct.

22 Q. That's written in C++; correct?

23 A. Yes.

24 Q. And then Ruby on Rails, or Ruby, did you ever work with  
25 that?

1     **A.**    In what capacity?

2     **Q.**    With respect to the AML BitCoin and Aten Coin code here --  
3     or, rather, to take a step back, in that 15-hour course, did  
4     you study the programming language Ruby?

5     **A.**    I did not.

6     **Q.**    And that's, in fact, what much of the code in the  
7     AML BitCoin and Aten Coin code base is written in; correct?

8     **A.**    For AML BitCoin, yes.

9     **Q.**    So is it your testimony, then, that your education in  
10    software development and source code review is largely based on  
11    a 15-hour online course?

12    **A.**    No.

13    **Q.**    Could you please elaborate?

14    **A.**    The volume of casework that I've performed over the  
15    duration of my career provided on-the-job training through the  
16    extensive amount of work performed in conducting those  
17    investigations in support of various expert projects for  
18    additional experts within my practice and firm.

19    **Q.**    Understood.

20           Let's talk about your educational background.  Okay?  So  
21    you have a C.V. and a LinkedIn profile; correct?

22    **A.**    Yes.

23    **Q.**    And there you list a bachelor's degree you obtained from  
24    Virginia Tech; correct?

25    **A.**    Yes.

1 Q. And you earlier discussed it was a Bachelor's of Science;  
2 right?

3 A. Yes.

4 Q. But today counsel didn't ask you what that degree was in;  
5 correct?

6 A. No.

7 Q. And your LinkedIn profile doesn't state what the degree is  
8 in; correct?

9 A. I don't believe it does.

10 Q. And your résumé that was provided to the Government as  
11 part of your expert disclosures also doesn't say what you  
12 studied; correct?

13 A. I don't believe it does, no.

14 Q. You studied psychology; correct?

15 A. Psychology, sociology, criminology.

16 Q. Okay. Let's talk about your publications or  
17 presentations.

18 Have you authored any publications in the past ten years?

19 A. I have not.

20 Q. And earlier counsel asked you about your prior trial  
21 testimony. Do you remember that?

22 A. Yes.

23 Q. Within the last four years, you've testified at trial  
24 once?

25 A. Yes.



1 Q. And in the course of your entire career, that was your one  
2 trial testimony?

3 A. Yes.

4 Q. That was a divorce case in the state of Indiana; right?

5 A. Yes.

6 Q. And you didn't testify to source code analysis in that  
7 divorce case; correct?

8 A. No, but there was the aspect of the Ethereum blockchain in  
9 that specific case which involved a fork of the blockchain, and  
10 reviewing that aspect of the fork and confirming the  
11 disposition of assets was a key part of the testimony and  
12 ultimate decision.

13 Q. Right. In that family law case, you did tracing. You  
14 tried to track where Ethereum went through the Ethereum  
15 blockchain; correct?

16 A. Yes.

17 Q. And that's separate from analyzing source code for Bitcoin  
18 and forks of Bitcoin; correct?

19 A. Though there was an aspect of understanding a fork in the  
20 Ethereum code.

21 Q. Let's talk about deposition testimony.

22 Have you testified in a deposition at all in the last  
23 four years?

24 A. No.

25 Q. Have you ever been deposed?

1 A. Not deposed.

2 Q. So fair to say this is your first time ever testifying  
3 about source code review and analysis?

4 A. To what capacity? Can you elaborate?

5 Q. Well, have you ever testified in court about source code  
6 review and analysis?

7 A. No.

8 Q. And, Mr. Min, you wrote on your LinkedIn profile that you  
9 are a battle-tested investigator and expert witness; correct?

10 A. Yes.

11 Q. Let's talk about your work history.

12 You've been a consultant your whole career, as listed on  
13 your résumé; correct?

14 A. Yes.

15 Q. And fair to say that before you joined FTI Consulting,  
16 your jobs were primarily focused on information security and  
17 project management?

18 A. No.

19 Q. What am I missing there?

20 A. Digital forensics, investigations, e-discovery support, as  
21 well as cybersecurity, proactive on that end, as well, as far  
22 as incident response as well.

23 Q. Okay. And you've never been employed as a software  
24 developer; correct?

25 A. Correct.

1 Q. I want to talk about your expert disclosure, which you  
2 approved and filed in this case.

3 The second sentence of that disclosure in the  
4 qualifications section, you write over 20 -- that you have over  
5 20 years of investigative and advisory experience across  
6 cryptocurrency, blockchain technologies, intellectual property  
7 theft, fraud, and other digital forensic-based work.

8 Did I get that -- get that right?

9 A. Yes.

10 Q. Mr. Min, would you say you have over 20 years of  
11 experience in cryptocurrency work?

12 A. No.

13 Q. Over 20 years of experience in blockchain technologies?

14 A. No.

15 Q. And the qualifications you listed in your disclosure do  
16 not include computer science; correct?

17 A. That's correct.

18 Q. Programming is not mentioned in that disclosure; correct?

19 A. Correct.

20 Q. And, Mr. Min, you've never published code on GitHub  
21 before; correct?

22 A. No.

23 Q. Have you ever written working programs in the programming  
24 language C++?

25 A. No.

1 Q. Have you ever written working programs in the programming  
2 language Ruby?

3 A. No.

4 Q. Have you ever written any programming -- excuse me.  
5 Have you ever written any computer program from scratch?

6 A. No. I'm not a developer.

7 Q. And the code we're viewing today, those are written in C++  
8 and Ruby; correct?

9 A. Yes.

10 Q. So your disclosure mentions, quote, "FTI's analysis"  
11 several times; correct?

12 A. Yes.

13 Q. How many other people helped you on your analysis to which  
14 you're testifying under oath today?

15 A. Two.

16 Q. But the jury won't hear from them; correct?

17 A. Correct.

18 Q. What portion of the analysis was conducted by you  
19 personally?

20 A. Review of the code with the team, individual analysis  
21 myself, reviewing files, commits.

22 Q. Let's talk about the code that you reviewed.

23 Mr. Min, how did you obtain the Bitbucket repositories and  
24 other source code you reviewed in this case?

25 A. Directly from Bitbucket, the Bitbucket account.

1 Q. And that log-in information was provided to you by the  
2 defense team?

3 A. Correct.

4 Q. And so in the course of your work for this case, did you  
5 depend on the defense team to send you what to review?

6 A. Yes.

7 Q. And you reviewed what they and Mr. Andrade told you to  
8 review; correct?

9 A. Yes.

10 Q. And they provided you with what Mr. Andrade claimed was  
11 his source code; correct?

12 MR. STEFAN: Objection. Foundation.

13 THE COURT: Overruled.

14 BY MR. CHOU:

15 Q. And they provided you with what Mr. Andrade claimed was  
16 his source code; correct?

17 A. Yes.

18 Q. When in time, when did the defense team first share with  
19 you what Marcus Andrade claims is his source code?

20 A. With regards to Bitbucket -- oh, God, this case has been  
21 ongoing for quite some time. I'd say that was in 2023, early  
22 2023.

23 Q. Early 2023?

24 A. I think that's correct, yes.

25 Q. And then you said that's with respect to Bitbucket. Were

1 there disclosures of other sets of data --

2 A. Yes.

3 Q. -- at a later date?

4 A. Yeah. The Aten Coin.

5 Q. And when was that first disclosed to you?

6 A. I believe November of last year.

7 Q. So November of 2024?

8 A. Correct.

9 Q. Would it surprise you if the defense team never disclosed  
10 that data to the Government until January 22nd, 2025?

11 MR. STEFAN: Objection. Relevance.

12 THE COURT: What is the relevance of this witness  
13 testifying to that?

14 MR. CHOU: Well, Your Honor, it goes to the lack of  
15 basis for his testimony, and also the defense explored this  
16 same sort of topic in their cross-examination of --

17 THE COURT: You can examine about the timing of when  
18 the witness received things, but the question was would it  
19 surprise him. I think you need to rephrase that question.

20 MR. CHOU: Understood, Your Honor.

21 Q. So, Mr. Min, you just testified that you received the code  
22 from the defense team either in early 2023 or November 2024.  
23 Did I get that right?

24 A. Yes.

25 Q. Did you know that in June of 2019, the federal grand jury

1 in this courthouse demanded that the NAC Foundation provide all  
2 records relating to AML BitCoin software development, including  
3 source code?

4 **MR. STEFAN:** Objection. Relevance.

5 **THE COURT:** Overruled.

6 **BY MR. CHOU:**

7 **Q.** I can ask the question again if --

8 **A.** Please.

9 **Q.** Did you know that in June of 2019, the federal grand jury  
10 in this courthouse demanded that the NAC Foundation provide,  
11 quote, "all records relating to AML BitCoin software  
12 development," end quote, including source code?

13 **A.** No.

14 **Q.** You didn't know that?

15 **A.** I did not.

16 **Q.** But Marcus Andrade failed to provide any source code to  
17 the grand jury; right?

18 **A.** Unaware.

19 **MR. STEFAN:** Objection. Foundation. Speculation.

20 **THE COURT:** Overruled.

21 **MR. STEFAN:** And --

22 **THE COURT:** Overruled.

23 **BY MR. CHOU:**

24 **Q.** But Marcus Andrade failed to provide any source code to  
25 the grand jury; correct?

1     **A.**    Unaware of that.

2     **Q.**    You're not sure one way or another?

3     **A.**    I wouldn't know.

4     **Q.**    You just trusted what the defense team was giving you when  
5     you were hired by them; correct?

6           **MR. STEFAN:**  Objection.  It's argumentative.

7           **THE COURT:**  Overruled.

8     **BY MR. CHOU:**

9     **Q.**    Sorry.  I'll ask the question.

10        You just relied on what the defense team gave you to  
11     analyze; correct?

12     **A.**    The code that was provided was what I had to review.

13     **Q.**    Mr. Min, your analysis assumes that the source code you've  
14     received is authentic; correct?

15     **A.**    Yes.

16     **Q.**    It assumes that -- and I'm sorry.

17        Before getting there, we had just talked about code you  
18     received in 2023 and 2024.  That's several years after the FBI  
19     executed search warrants on Mr. Andrade; correct?

20     **A.**    To my understanding, yes.

21     **Q.**    And so the source code you got, you relied on the defense;  
22     correct?

23     **A.**    Yes.

24     **Q.**    And you're assuming that what Mr. Andrade is giving you  
25     really was the source code at the time; correct?



1 A. Yes.

2 Q. And you're assuming that the code hasn't been edited  
3 before it came to you; correct?

4 A. Yes.

5 Q. That there's been no changes to the plain text timestamps;  
6 correct?

7 A. Yes.

8 Q. And that there hasn't been any new code added after the  
9 fact before you saw it; correct?

10 A. Yes.

11 Q. And do you remember testifying on direct that in late  
12 2018, you saw commits, quote, "a whole lot of data all of a  
13 sudden"?

14 A. Yes.

15 Q. And was the date of that November 2018?

16 A. Yes.

17 Q. Are you --

18 A. Or December. December was when the first lines of code  
19 were committed.

20 Q. November or December --

21 A. Majority, yeah.

22 Q. -- 2018?

23 A. Yeah. That's where the large volume discussed was  
24 committed, was in December.

25 Q. And are you aware whether or not the FBI executed a search

1 warrant on Mr. Andrade's offices on September 13th, 2018?

2 A. No.

3 Q. And are you aware whether or not Melanie Cowan testified  
4 that in October or November of that year, Mr. Andrade directed  
5 her to start changing online media posts?

6 A. Unaware.

7 Q. So you don't know for certain that the source code you  
8 reviewed is authentic; correct?

9 A. To the basis of the project and the code, it appeared to  
10 be authentic. It was told to be authentic. I had no reason to  
11 believe that it was not authentic.

12 Q. Sure.

13 So let's talk a bit about the source code. But before we  
14 do, just a couple of threshold sort of scene-setting questions.

15 Mr. Min, in all my questions today about the code, I want  
16 to direct our attention to just what the code appeared to be on  
17 or before October 2018. Okay?

18 A. Okay.

19 Q. And I don't intend to ask you whether or not the code  
20 worked sometime in the distant future, like 2020 or '21. Okay?

21 A. Okay.

22 Q. So, Mr. Min, your disclosure says that you reviewed source  
23 code from over 70 repositories and databases. Is that  
24 accurate?

25 A. Yes.

1 Q. And on direct, you testified to something called commit  
2 history. Did I get that right?

3 A. Yes.

4 Q. And could you just remind us what commit history is?

5 A. Yes. Commit history is associated with a Git application  
6 for code management to commit lines of code that have been  
7 changed and track those changes to the code, including,  
8 you know, the developer that performed the code changes as well  
9 as the timestamp they were performed.

10 Q. So at a high level, commit history tracks when code is  
11 edited; correct?

12 A. Yes.

13 Q. And it's -- is it machine generated, like a  
14 machine-generated log?

15 A. Yes.

16 Q. In the format that you received them, most of those  
17 repositories lack this commit history of changes; right?

18 A. Yes.

19 Q. And instead of machine-generated commit history, you  
20 mostly received source code stored in text files; right?

21 A. Can you elaborate to the specific repository we're  
22 referring? Because we have AML BitCoin and then we have  
23 Aten Coin. So I want to make sure I'm clear to what I'm  
24 speaking to.

25 Q. Sure. Why don't we first discuss Aten Coin.

1           So instead of machine-generated commit history, what did  
2   you receive there?

3   **A.**    Yeah. The source code, you know, had the structure of a  
4   Git repository, the same folder structuring, you know, the  
5   aspects that you would expect to see from a Git export, though  
6   in the Aten Coin case, we did not have the commit history  
7   included with the deliverable.

8   **Q.**    So in the Aten Coin case, you did not have the commit  
9   history. What about for the AML BitCoin repositories?

10 **A.**    Those did have commit history.

11 **Q.**    How many of them had commit history?

12 **A.**    I don't recall offhand exactly how many of the --

13 **Q.**    Okay.

14 **A.**    -- 58 that actually had data.

15 **Q.**    Right. They actually had data, but that's a separate  
16 issue from whether there was a log of when changes were pushed  
17 to the code; correct?

18 **A.**    I'm sorry. Rephrase the question again. Repeat the  
19 question. Excuse me.

20 **Q.**    Your testimony on cross, if I just heard it correctly, was  
21 that 58 repositories had data in them; right?

22 **A.**    Yes.

23 **Q.**    But that's a different sort of thing than stating whether  
24 or not there were -- there was commit history for those 58;  
25 correct?

1 A. Yes.

2 Q. And so for the files that did not have commit history,  
3 that was stored in, like, a text format. Is that fair to say?

4 A. What repository?

5 Q. Let's just set aside the ones that had commit history.  
6 Let's just talk about the ones that didn't.

7 A. So Aten Coin, just to clarify?

8 Q. Sure.

9 A. Okay. So --

10 Q. And also, as I understand it, some AML BitCoin ones too;  
11 correct?

12 A. Now that I know you're speaking to both, if you don't mind  
13 asking -- rephrasing the question or repeat the question,  
14 please.

15 Q. Is it your testimony here today, Mr. Min, that every  
16 single AML BitCoin repository had commit history?

17 A. No.

18 Q. Okay. So I am just asking you, just to get us on the same  
19 page, about repositories across Aten Coin and AML BitCoin that  
20 didn't have commit history. Are we on the same page?

21 A. Yes.

22 Q. So for those, those are stored in what's essentially a  
23 text file; correct?

24 A. Documentation within the folder structure, text files,  
25 source code files. There's an assortment of different types of

1 documentation that are stored within either a Git repository or  
2 an export of the code from a Git repository.

3 Q. And when we're talking about source code, that's  
4 ordinarily written in a plain text format; right?

5 A. Yes.

6 Q. And anyone can easily edit a text file; right?

7 A. A text file, yes.

8 Q. They can change the dates in that text file?

9 A. Yes.

10 Q. They can input whatever they want into that text file?

11 A. Theoretically, yes.

12 Q. Let's talk about the volume of code that you and the FTI  
13 team reviewed.

14 Mr. Min, in your disclosure, you state that nearly  
15 16.5 million lines of code were committed and used for  
16 development in the remaining AML BitCoin repositories; is that  
17 correct?

18 A. Yes.

19 Q. You know, 16.5 million lines of code sounds like a lot.  
20 How did you arrive at that number?

21 A. Through the actual commits for those codes and what was  
22 actually committed.

23 Q. And is it your opinion, Mr. Min, that the developers of  
24 AML BitCoin created those nearly 16.5 million lines of code  
25 themselves?

1 A. They committed them, yes.

2 Q. Okay. They committed them, but I just want to be precise  
3 here about our wording.

4 When somebody commits something, they can grab that code  
5 from anywhere; right?

6 A. Yes.

7 Q. And so out of that 16.5 million lines of code, how many  
8 lines of code are actually written by developers of  
9 AML BitCoin?

10 A. I didn't perform that analysis.

11 Q. Did you analyze or identify any third-party source code in  
12 the AML BitCoin data?

13 A. With regards to -- I'm not sure I understand the question.

14 Q. In the 16.5 million lines of code that you say you  
15 reviewed, did you identify any code that was written by people  
16 unaffiliated with AML BitCoin altogether?

17 A. The source of AML BitCoin being a fork? Right? Well,  
18 Aten Coin -- excuse me -- being a fork of the Bitcoin  
19 blockchain, yes, with that capacity of you need a starting  
20 point.

21 Q. And, Mr. Min, can you please explain for us what a comment  
22 is in source code?

23 A. A comment would be a notation for a specific line of code  
24 or, you know, leaving a comment by a developer within the code  
25 itself. There's various aspects of how you can do that, either

1 through commit history; you can leave a message through leaving  
2 a note within an underlying file or source code file. You can  
3 do it that way as well.

4 Q. And, Mr. Min, when one runs a program, the comments don't  
5 do anything while the program is running; correct?

6 A. No, they do not.

7 Q. Out of the nearly 16.5 million lines of code, how many  
8 were just comments?

9 A. I'm not sure I understand the question.

10 Q. So earlier you stated in your disclosure that there were  
11 nearly 16.5 million lines of code in this AML BitCoin database  
12 you reviewed; correct?

13 A. Yes.

14 Q. How many lines of those were comments, like comment lines  
15 that don't run when you run the code?

16 A. I wouldn't know. I did not perform that review.

17 Q. You did not perform that review.

18 And in addition to comments, does computer source code  
19 sometimes contain blank lines?

20 A. It can.

21 Q. Were there blank lines in this source code?

22 A. There's some here and there, yes.

23 Q. But you didn't tally those up either; right?

24 A. No.

25 Q. Let's talk about the -- some of your opinions regarding



1 the code.

2 Mr. Min, in your disclosure and I think on direct, you  
3 testified or you stated that the quality and sophisticated  
4 nature of the source code reviewed by FTI is reflective of at  
5 least 18 to 24 months' worth of work by qualified and  
6 intelligent developers. Did I get that right?

7 A. Yes.

8 Q. But then you testified on direct that you had a number of  
9 technical issues with your analysis; correct?

10 A. Yes.

11 Q. And you had difficulties getting things to run; correct?

12 A. Yes.

13 Q. And, again, you did not personally review all of the  
14 source code; right?

15 A. Not directly, but with -- you know, through a review  
16 process with my team that was assisting on the analysis, all  
17 aspects were reviewed together.

18 Q. And as we discussed earlier, your formal training with  
19 respect to C++ and Ruby is zero; correct?

20 A. Formal training. But on-the-job training, I've reviewed  
21 many times those code bases.

22 Q. And you testified that you don't know how much of  
23 AML BitCoin source code was written by third parties; correct?

24 A. Correct.

25 Q. Prior to this case with Marcus Andrade, Mr. Min, have you

1 ever offered an expert opinion regarding the time required to  
2 develop source code you analyzed?

3 A. No, I have not.

4 Q. And prior to this case, have you ever offered an expert  
5 opinion regarding the qualifications of some other software  
6 developer based on your analysis of that developer's source  
7 code?

8 A. Not formally.

9 Q. And you opined that the work was performed by qualified  
10 and intelligent developers. Did I get that right?

11 A. Yes.

12 Q. Prior to this case, have you ever offered an expert  
13 opinion regarding the intelligence of a software developer  
14 based on your analysis of that person's source code?

15 A. Not formally.

16 Q. You testified on direct a number of things about  
17 Aten Coin. Do you recall that?

18 A. Yes.

19 Q. And I want to talk about some of the conversations that  
20 you said you had with developers.

21 You spoke with an individual named Terence Poon; correct?

22 A. Yes.

23 Q. He's an individual based in Mainland China?

24 A. I don't know his -- his place of domicile, where he  
25 resides, no.

1 Q. Okay. Was -- how was this conversation conducted? Over  
2 the phone or in person?

3 A. Correct, teleconferencing.

4 Q. Teleconferencing.

5 And then you also spoke with one other developer, someone  
6 named Sergey?

7 A. Yes.

8 Q. What was their last name?

9 A. Pardon the pronunciation, but Petkevich.

10 Q. Petkevich. Okay.

11 Did you speak with any other people who said that they  
12 were developers of either Aten Coin or AML BitCoin?

13 A. No.

14 Q. And you testified on direct that after your conversations  
15 with Terence Poon and Sergey Petkevich -- Petkevich, you did  
16 not rely on those conversations for your opinions today; right?

17 A. That's correct.

18 Q. So why didn't you rely on conversations by the people who  
19 said they developed this code?

20 A. Yeah. Frankly, the request for the call was primarily to  
21 speak with Sergey, as he was understandably a primary developer  
22 on the project. Terence Poon was brought in to assist on the  
23 conversation. And, personally, in my opinion, Terence took  
24 over the conversation. It was very one-sided, and he kept it  
25 very high level as far as architecture, and didn't really get

1 the opportunity to ask questions.

2 So it was very limited as far as what we were able to  
3 learn in a very short time period, of which, you know, we had a  
4 window of time with him and no opportunity for follow-up due to  
5 schedules, is my understanding.

6 Q. And so you mentioned it was a very short time period.  
7 When did these conversations take place?

8 A. January 6th, I believe, of 2025.

9 Q. Oh. So a few weeks ago or --

10 A. Two months, yeah.

11 Q. And was that the only time you ever spoke with those  
12 developers, or were there other conversations too?

13 A. That was the only time.

14 Q. And did you ever request follow-up?

15 A. I did.

16 Q. And did that happen?

17 A. It did not.

18 Q. You also testified on direct that you weren't able to  
19 access a lot of materials, including ones stored on Amazon  
20 servers. Did I get that right?

21 A. Yes.

22 Q. And yet despite all this, you testified on direct that in  
23 your expert opinion, Aten Coin was a working product during the  
24 relevant time period; correct?

25 A. Yes.

1 Q. Let me posit to you a hypothetical. If Aten Coin was a  
2 working product, would an Aten Coin user be able to submit a  
3 cartoon photograph of Homer Simpson to be an approved user by  
4 Aten Coin?

5 A. I'm not sure I'm following. Can you explain the context  
6 for the question --

7 Q. Sure.

8 A. -- in regards to AWS?

9 Q. Well, this is leaving aside AWS.

10 A. Okay.

11 Q. So we're talking about Aten Coin.

12 Your opinion on direct was that Aten Coin, in your expert  
13 opinion, was a working product before October 2018 --

14 A. Understood. Thank you.

15 Q. -- correct?

16 A. Yes.

17 Q. Yes. And you also mentioned on direct, you opined that  
18 you saw some biometric features for Aten Coin; correct?

19 A. Yes.

20 Q. Purported third-party verification?

21 A. Yes.

22 Q. And so, hypothetically, if somebody submitted a photo of  
23 Homer -- are you familiar with Homer Simpson, the --

24 A. I am, yes.

25 Q. Okay. If somebody submitted a photo of Homer Simpson to

1 Aten Coin and tried to get verified under that name and they  
2 were, in fact, verified, in your expert opinion, would that be  
3 a working -- a working Aten Coin product?

4 **A.** If a cartoon character -- so I understand your question,  
5 if a cartoon character image was submitted acting as an  
6 individual --

7 **Q.** Named Homer Simpson.

8 **A.** -- by the name of Homer Simpson --

9 (Simultaneous speaking. Stenographer interrupts for  
10 clarification of the record.)

11 **THE WITNESS:** -- by an individual, a real person named  
12 Homer Simpson?

13 **BY MR. CHOU:**

14 **Q.** Correct.

15 **A.** I don't know the specifics as far as the recognition  
16 capabilities. I would presume no.

17 **Q.** Right. And, Mr. Min, you talked about Aten Coin, which is  
18 a cryptocurrency; right? And -- right?

19 **A.** Yes.

20 **Q.** And you showed images of what appears to be the Aten Coin  
21 wallet; correct?

22 **A.** Yes.

23 **Q.** Did you ever review any transactions on an Aten Coin  
24 blockchain?

25 **A.** Let me think. As far as the -- pardon. For Aten Coin,

1 no.

2 Q. And earlier you testified on direct that you have  
3 experience in cryptocurrency tracing; correct?

4 A. Yes.

5 Q. In fact, your only prior testimony was in a family court  
6 case about Ethereum tracing?

7 A. Yes.

8 Q. And yet in this case, you did not see any transactions on  
9 an Aten Coin blockchain; correct?

10 A. Correct.

11 Q. You testified that you spoke with two developers, Terence  
12 Poon and Sergey Petkevich; correct?

13 A. Yes.

14 Q. Did you speak with any people who bought Aten Coin?

15 A. No.

16 Q. Did you speak with any people who bought AML BitCoin  
17 tokens?

18 A. No.

19 Q. Did you speak with any office workers who either worked on  
20 the Aten Coin project or the AML BitCoin project?

21 A. No.

22 Q. And did you review any financial records about how money  
23 was spent on these -- on the development of these projects?

24 A. No. Not part of my investigation. My investigation was  
25 specific to the Aten Coin and AML BitCoin projects.

1 Q. Understood.

2 Mr. Min, you testified earlier that the first commit you  
3 identified in the AML BitCoin repositories was from either  
4 November or December of 2018 --

5 A. Yes.

6 Q. -- is that right?

7 Is it November or is it December?

8 A. Both.

9 Q. Both.

10 Okay. Which repository exactly contains that  
11 November 2018 commit?

12 A. I believe it was AML Bit.

13 Q. AML Bit. Okay.

14 Would it surprise you if a computer scientist looked  
15 through the code that you produced and there isn't a single  
16 repository with commits from November 2018?

17 A. I'm sorry?

18 Q. Would it surprise you if another computer scientist or,  
19 rather, a computer scientist looked through the AML BitCoin  
20 code and didn't find a single repository with that date you  
21 just mentioned?

22 A. It would.

23 Q. Okay. And you relied on others to provide you that  
24 November 2018 date; correct?

25 A. Yes.



1 Q. So let's pause for a second on this November 2018 or  
2 December 2018 date. This was the first date that you claim  
3 there were changes to the AML BitCoin code; correct? Or  
4 commits, rather.

5 A. Yes.

6 Q. And you don't know when the FBI first executed search  
7 warrants on Marcus Andrade's office and Jack Abramoff's house?

8 A. No, sir.

9 Q. And you don't know when Marcus Andrade first told Melanie  
10 Cowan to start editing AML BitCoin social media posts from past  
11 tense to future tense?

12 A. No, sir.

13 Q. And do you know that November 2018 is just two months  
14 after the FBI first went public with this investigation into  
15 Marcus Andrade?

16 A. No, sir.

17 Q. You didn't know that until sitting here just now?

18 A. I'd read the article. So, yes, actually, I had.

19 Q. Okay.

20 A. I'd researched it.

21 Q. Did you know whether or not developer Evan Carlsen  
22 testified that in November of 2018, he was working on Stage 1  
23 of AML BitCoin, reviewing Aten Coin?

24 A. I can't recall specifically what Mr. Carlsen testified to.

25 I was made aware of an interview quite some time ago. I don't

1 recall offhand what the details were, though.

2 Q. And, in fact, he testified that there was no AML BitCoin  
3 at that point in November 2018; correct?

4 MR. STEFAN: Objection. Foundation.

5 THE COURT: Overruled.

6 BY MR. CHOU:

7 Q. Mr. Min, do you know whether or not Mr. Carlsen testified  
8 that, quote, "no AML BitCoin at that point," end quote, in  
9 reference to November 2018?

10 A. As I mentioned, I don't recall the specifics of his  
11 interview or which testimony you're specifically referring to.

12 Q. But November 2018, sir, is when you say Marcus Andrade  
13 first created the AML BitCoin Bitbucket; correct?

14 A. Yes. It was the first commit that occurred within that  
15 AML BitCoin Bitbucket repository.

16 Q. Right. You don't see any commits before that date?

17 A. Correct.

18 Q. And commits, as we discussed earlier, that's ordinarily  
19 the way that developers track the timing of changes to code;  
20 correct?

21 A. Yes, sir.

22 Q. I want to turn to some of your opinions.

23 So earlier counsel asked you about your first opinion on  
24 this demonstrative, which is that Aten Coin appears to have  
25 been a complete functional product that relied on third-party

1 software for ID verification. Do you remember that?

2 A. Yes.

3 Q. And you testified in response on direct that portions  
4 appeared to be working; correct?

5 A. Yes.

6 Q. Excuse me. Mr. Min, I'd like to, at this time, show you  
7 some of your demonstratives and then code that you produced as  
8 part of your disclosures in reference to those demonstratives.  
9 Okay?

10 A. Sure.

11 MR. CHOU: So if we could please show the Court,  
12 parties, and the witness Exhibit -- what's been marked as  
13 Government demonstrative or Exhibit 6000.

14 Q. Mr. Min, can you see that okay?

15 A. Yes, I can.

16 Q. And this is one of your demonstratives that you walked  
17 through earlier on direct; correct?

18 A. Yes, sir.

19 MR. CHOU: And if we could scroll on to the next page.

20 Q. This here, you see the black lines and then what appears  
21 to be this code. Is this code that was produced by you in your  
22 disclosure materials?

23 A. I don't recall offhand, but if it's a source to that  
24 specific database, then, yes.

25 MR. CHOU: So if we could please scroll back up to the

1 first page, please.

2 And the Government moves to publish this, but not admit it  
3 pursuant to Federal Rule of Evidence 107.

4 **THE COURT:** You may.

5 **BY MR. CHOU:**

6 **Q.** All right. Are you able to see this okay, Mr. Min?

7 **A.** Yes.

8 **Q.** And so, Mr. Min, did you create this chart?

9 **A.** One of my colleagues did.

10 **Q.** One of your colleagues did.

11 Okay. And the vertical axis, the labels jump from 1 to 10  
12 to 100 and so on; right?

13 **A.** Yes.

14 **Q.** Is that because there were a lot of users created in  
15 June 2017 but far fewer in the other time periods?

16 **A.** No. The design was meant to reflect as accurately as  
17 possible the actual user counts, you know, for the respective  
18 time periods. With the large amount in 2017 of June, we had to  
19 account for the 10 -- 10,000 lines.

20 **Q.** That was a poorly --

21 **A.** Or, excuse me. The 10,000 --

22 **Q.** Go ahead.

23 **A.** The 10,000 entries.

24 **Q.** And that was a poorly phrased question.

25 More just, if the vertical axis was a linear one that

1 didn't multiply, the bars would be different scale; right?

2 A. I'm not sure I'm following. Can you rephrase?

3 Q. So you're familiar with the vertical --

4 A. Yes.

5 Q. -- axis in this chart?

6 A. Mm-hmm.

7 Q. And do you see how it goes from 1 user to 10 and then to  
8 100 and then to 1,000 and then 10,000?

9 A. Correct.

10 Q. That's like an exponential scale; right?

11 A. Yes.

12 Q. And so the height of the blue bars is a little squished;  
13 correct?

14 A. Yes.

15 Q. And can we please take a look at the horizontal axis here  
16 where the dates are shown. Over on the right side, do you see  
17 where the third bar from the right and the second bar from the  
18 right it says "2017-12" and "2018-04"?

19 A. Yes.

20 Q. Do those represent December 2017 and April 2018?

21 A. Respectively, yes.

22 Q. There's a four-month gap there; right?

23 A. Yes.

24 Q. And there's no gaps elsewhere in this horizontal chart,  
25 similar time gaps?

1 A. Correct, that's right.

2 Q. And is that because there was no activity in those three  
3 to four months that are omitted?

4 A. That's accurate.

5 Q. Did you omit those months from your chart so that it  
6 looked like there was consistent development activity over  
7 time?

8 A. No. No. We reported on the data itself and what actually  
9 had values, and that explains the timestamps.

10 Q. And, Mr. Min, did you personally review the data used to  
11 create this users chart?

12 A. I don't recall offhand specifically, but I did review the  
13 analysis and the resulting chart with my colleague.

14 Q. Okay. The chart you relied on to create this -- or,  
15 sorry -- the data you relied on to create this chart is just  
16 fake data, isn't it?

17 A. Fake data? Can you elaborate?

18 MR. CHOU: If we can scroll down to the next  
19 demonstrative, please.

20 Q. So earlier you mentioned that this appears to be source  
21 code or data taken from your 16.5 million lines of code that  
22 you turned over to the Government; correct?

23 A. Yes.

24 Q. And, Mr. Min, is this part of the data you used to create  
25 the chart or that your team used to create the chart that we

1 were just looking at?

2 A. Yes.

3 Q. And do you see the names and email addresses that look  
4 like -- that comprise the various rows here?

5 A. Yes.

6 Q. Do these look like real users of the system to you?

7 A. Yeah. This -- I see your point. These are -- you know,  
8 appear to be test data, which is a common practice in  
9 developing any source code and any application. You have to  
10 test it thoroughly, and obviously, you don't have a large  
11 population of test subjects to just openly give their  
12 information to provide, so you would essentially create a test  
13 subject here in this case to have data for the purposes of  
14 testing the overall functionality of the application.

15 Q. So, for example, the first row here in this demonstrative,  
16 it says "Donald Tramp J." or "Donald J. Tramp." That's an  
17 example of a test user?

18 A. I would believe so.

19 Q. So would you agree, then, that the users in your  
20 demonstrative, the ones that we just saw on the previous slide,  
21 those are not real users?

22 A. Yeah. I testified to that, those are, in fact, test data.

23 MR. CHOU: Let's scroll down to the next page, please,  
24 of this Government demonstrative.

25 Q. So, Mr. Min, you testified on direct about some timestamps

1 you saw in the AML BitCoin source code; correct?

2 A. Yes.

3 Q. And this table here reflected some timestamps that you  
4 said were as early as 2017; correct?

5 A. Yes.

6 Q. In your experience conducting digital forensic  
7 investigations, is it standard practice to rely on dates and  
8 times typed into a text file that any human could alter?

9 A. Well, for the sake of understanding the complexities of  
10 the source code, the underlying data, and what's occurring,  
11 this applies.

12 Q. Okay. But earlier we discussed that much of the source  
13 code you reviewed was in a text format; right?

14 A. These are essentially -- with aside of the SQL database,  
15 the majority of these are text files.

16 Q. And so the timestamps that are represented on your  
17 demonstrative here, those were pasted from text files into this  
18 chart; correct?

19 A. Correct.

20 Q. And so those text files could have been easily modified  
21 by, say, opening them in Windows Notepad and doing some edits?

22 A. In the way that they're created, you've got programmatic  
23 applications creating those timestamps. You've got an  
24 assortment of different, you know, manual creations of these  
25 notes as listed, you know, by -- you know, created by



1 Athanasios Moutsoul.

2 I'll give you a second to spell that one.

3 You know those are all aspects, yes, that they  
4 theoretically could be modified in a -- via a text file edit.

5 **Q.** So at the end of the day, you don't know whether or not  
6 the text files were edited; correct?

7 **A.** I find it highly unlikely that these would have been  
8 modified; but to answer the question, no. No.

9 **Q.** And did you analyze whether the timestamps in these files  
10 had been manipulated?

11 **A.** With regards to a timestamp? The only thing I could tell  
12 was that the files themselves had been created or last written  
13 in the 2019 time period.

14 **Q.** Okay. So based on your analysis, the files were last  
15 created or modified in 2019. Did I get that right?

16 **A.** Yeah, based on the commit history and -- excuse me.

17 From the files being generated from the Bitbucket  
18 repository that was created at the tail end of 2018, and  
19 continued development in 2019, those files would inherently,  
20 just by the metadata of them, be a 2019 timestamp.

21 **Q.** Got it. But the text that your team copy/pasted out of  
22 those files, some of it's from '17, for example?

23 **A.** Yes.

24 **Q.** So let's look at the first two entries on this -- on your  
25 demonstrative here.

1           You cite something that ends with Gradle Wrapper  
2 properties. Do you see those top two --

3   **A.**    Yes.

4   **Q.**    -- rows?

5           And then the timestamps you provide are August 2017 and  
6 May 2018. Did I get that right?

7   **A.**    Yes.

8   **Q.**    And then the little hash in front of the time, is that  
9 basically indicating it's a comment, like a text comment?

10 **A.**    It's a -- that's a programmatic timestamp.

11 **Q.**    Okay. And then over on the left in those rows, you see  
12 how it begins with the word "Corda"?

13 **A.**    Yes.

14 **Q.**    Corda is software that's publicly available online on a  
15 website called GitHub; right?

16 **A.**    Yes.

17 **Q.**    And so it's -- but it's your opinion that these represent  
18 AML BitCoin development activity?

19 **A.**    Yes.

20 **Q.**    Mr. Min, these log files from 2017 were created by  
21 third-party software developers and copied into AML BitCoin  
22 source code, weren't they?

23 **A.**    I did not review to that extent.

24           **MR. CHOU:** Well, let's scroll to the next  
25 demonstrative, please -- or, rather, just the next page.

1 Q. So do you see how on the left, does that appear to be code  
2 that you or your team reviewed and that you disclosed to  
3 the Government?

4 A. (Witness examines document.) I believe so.

5 Q. And do you see that same text on the left, it's a hash  
6 symbol, "Friday August 25th 12:50:39 BST 2017"?

7 A. I do.

8 Q. Did you know that if you go to that URL on the right,  
9 github.com/corda, that you can actually pull that same  
10 timestamp from just the Internet?

11 A. I didn't perform that review.

12 Q. You didn't perform that review.

13 To your knowledge, did your -- did the two members of your  
14 team perform that review, or was that out of scope?

15 A. I did not -- we did not review it.

16 Q. You did not review it.

17 Okay. Let's look at the other log files from 2017.

18 MR. CHOU: If we could scroll back up, please.

19 Q. So do you see how at the bottom two rows here in your  
20 demonstrative, it's social/app/tmp/debug.log and then there's  
21 an error.log?

22 A. Yes, sir.

23 Q. And the timestamp provide there is December 19, 2017?

24 A. I see that.

25 Q. Mr. Min, have you heard of a software application online

1 called mooSocial?

2 **A.** No.

3 **MR. CHOU:** If we could scroll a couple slides down to  
4 DX Min 5.

5 **Q.** So on the left, does that appear to be code that either  
6 you or your team reviewed and then produced to the Government?

7 **A.** This is sourcing from my disclosure? To confirm, I  
8 don't -- I mean, I've seen a lot of code, so it's difficult to  
9 confirm; but if that was in my disclosure, then, yes.

10 **Q.** Okay. But sitting here today, you're not sure when you're  
11 looking at code that was referenced in your demonstrative?

12 **A.** This -- this code was not in my demonstrative.

13 **Q.** Well, so earlier, when we were looking at the  
14 demonstrative, do you see that timestamp 2017-12-19 03:43:30?

15 **A.** Yes.

16 **Q.** And do you see how -- at least what I'm offering to you is  
17 code you provided to us, do you see that same timestamp to the  
18 left?

19 **A.** I do.

20 **Q.** Did you know that if you go to that mooSocial.com website  
21 linked on the right, that you can pull code with that same  
22 timestamp?

23 **A.** I did not.

24 **Q.** Did you know that it's a -- it appears to be a one-for-one  
25 match of just publicly available source code?

1 A. It likely was an open source project and added to the  
2 project, would be the explanation I could think of at this  
3 point; but, no, I did not. I wasn't aware of it.

4 MR. CHOU: If we could please scroll to the next  
5 demonstrative page, please.

6 Q. And, Mr. Min, have you ever -- Mr. Min, have you ever been  
7 onto this mooSocial website before?

8 A. No.

9 Q. Do you know whether or not it's a social networking  
10 program?

11 A. I hadn't used it.

12 Q. Okay. And do you see where it says "No coding skill  
13 required"?

14 A. I do.

15 MR. CHOU: We can scroll down.

16 Q. So, Mr. Min, do you recall your demonstrative that looked  
17 like this?

18 A. Yes.

19 Q. And you testified on direct that these were developer  
20 notes with observed timestamps for CrossVerify or something to  
21 that effect?

22 A. Yes.

23 Q. And do you see at the -- in the middle of the page here,  
24 there's a date referenced of 21 March 2018?

25 A. I see it.

1 Q. And there's another -- there's also another line below  
2 that, same thing.

3 Did you look at the contents of this file beyond just the  
4 date and the comment that followed that's excerpted here?

5 A. Over the time -- duration of the investigation, I did. I  
6 don't recall exactly what it was.

7 Q. Okay. And what did you do to validate that these files  
8 are authentic, by the way?

9 A. As far as validating them?

10 Q. Correct.

11 A. Reviewed the metadata, the timestamps, you know, reviewed  
12 the content there within.

13 Q. Okay. And so you opened a text file, you saw a timestamp,  
14 and then put that into your demonstrative?

15 A. Yes.

16 Q. Other comments in this same file suggest that the software  
17 didn't actually work; correct?

18 A. I don't recall.

19 MR. CHOU: Well, let's move to the next slide. This  
20 has been marked as DX Min 08.

21 Q. So do you see how up at the top there, we have those same  
22 21 March 2018 dates in the code, and then there's that excerpt  
23 from the code you produced in that snapshot to the left?

24 A. So the top is mine, the middle is --

25 Q. The left is the code you produced to us, and we're just

1 magnifying --

2 A. I see.

3 Q. -- to show that it's the -- it's the same code.

4 A. Yep, I see it.

5 Q. And so earlier, your demonstrative, you know, took  
6 snapshots of code -- right? -- particular lines?

7 A. Mm-hmm.

8 Q. But then if you scroll down just a -- I don't know --  
9 probably about 15 lines below that snapshot, there was -- there  
10 were further comments in that code; correct?

11 A. Yes.

12 Q. And you see where the comment stated in the code you  
13 produced, something along the lines of an IP address "Not used  
14 at all," exclamation point, exclamation point, question mark,  
15 question mark, exclamation point, exclamation point?

16 A. Yes.

17 Q. And do you see where below that in that same excerpt  
18 there's a couple of numbered comments? The first one states  
19 "Not able to get company registered," period?

20 A. Yes.

21 Q. And do you see the second number, it says "Not able to go  
22 beyond this stage and get CVID"? Do you see that?

23 A. Yes.

24 Q. What's your understanding of what CVID is?

25 A. CrossVerify identification.

1 Q. So not able to go beyond this stage and get CrossVerify  
2 identification?

3 A. Yes.

4 Q. And, Mr. Min, is it your opinion that the CrossVerify code  
5 is substantially close or -- to fully functional?

6 A. Yes.

7 MR. CHOU: If we could turn to the next demonstrative,  
8 please.

9 So -- oh, sorry. One moment. Actually, we can take this  
10 down, please.

11 Just give me one second.

12 (Pause in proceedings.)

13 BY MR. CHOU:

14 Q. So, Mr. Min, just one more demonstrative and then just  
15 some --

16 A. Yes.

17 MR. CHOU: So if we could, please, if the defense  
18 wouldn't mind pulling up Mr. Min's demonstrative, which  
19 I believe was marked as Exhibit 3395, at page 23.

20 Thank you very much.

21 Q. So, Mr. Min, do you remember testifying about this  
22 demonstrative here?

23 A. Yes.

24 Q. And this reflects CrossVerify code related to biometric  
25 data verification; correct?



1 A. For the database, yes.

2 Q. And then you testified on direct about a face score and  
3 iris score; correct?

4 A. Yes.

5 Q. And then on the --

6 MR. CHOU: If we could scroll to the next page,  
7 please, onto 24, if that's okay.

8 Q. And then, Mr. Min, you relied on entries in this table to  
9 describe, in your opinion, how CrossVerify was doing biometric  
10 verification; correct?

11 A. Yes, sir, I did.

12 Q. And, again, up at the top, do you see in that first line,  
13 starting with the blue copy on the left and in the middle, it  
14 says "face\_score" and "iris\_score"?

15 A. Yes, sir.

16 Q. Mr. Min, did you analyze the source code associated with  
17 those variables, face score and iris score?

18 A. Not specifically.

19 Q. Okay. Do you know if your team looked at it, or you're  
20 not sure right now?

21 A. I'm not sure.

22 Q. The source code that's referenced in your disclosure for  
23 face score and iris score is based on publicly available source  
24 code for drawing googly eyes; correct?

25 A. I don't know. I didn't review it.

1 Q. Mr. Min, do you know what I mean when I say "googly eyes"?

2 A. I assume you mean the -- actually, no.

3 Q. But the CrossVerify source code references, quote, "googly  
4 eyes graphic," end quote, and, quote, "googly face tracker";  
5 correct?

6 A. Again, I didn't review it.

7 Q. So you didn't research whether the CrossVerify biometric  
8 source code is, in fact, based on publicly available googly  
9 eyes code?

10 A. No.

11 Q. Mr. Min, would you consider -- well, so, first of all,  
12 let's just talk about googly eyes for a second.

13 Are you familiar with the concept of, like, a filter when  
14 you're using Snapchat or some sort of video application?

15 A. Yes.

16 Q. And are you familiar with how some applications will draw,  
17 like -- I don't know -- exaggerated features on one's face?

18 A. Yes.

19 Q. And have you seen those little sticky eyes you can put  
20 onto objects where the eyes sort of like roll around?

21 A. Yes.

22 Q. And so you don't know whether or not the code referenced  
23 by CrossVerify here is, in fact, substantially based on an  
24 application that draws googly eyes on somebody's face; right?

25 A. Yeah. No. I would imagine that it was open source and

1 leveraged for the project, of which the continued development  
2 early in the project would have used source code that was  
3 publicly available through the open-source project --

4 Q. Right.

5 A. -- of which, as done with Aten Coin for using the Bitcoin  
6 blockchain, leveraged that to build upon.

7 And, you know, essentially, that's what I think you have  
8 here, is that they utilized that, as you called it googly-eyed,  
9 you know, source code to develop their aspects therein.

10 Q. Well, in fact, Mr. Min, the code that you disclosed to us  
11 from CrossVerify references, quote, "googly eyes graphic" and  
12 "googly face tracker"; correct?

13 A. I don't recall.

14 Q. You don't recall. Okay.

15 And you haven't checked GitHub, for example, to see where  
16 you can download that code; correct?

17 A. Googly eyes? No.

18 Q. The same code, correct.

19 A. No.

20 MR. CHOU: We could take down this defense exhibit,  
21 please, or demonstrative.

22 And if we could please swap over to Government control of  
23 the monitors.

24 Q. So, Mr. Min, from your code review, you couldn't see  
25 whether Aten Coin was a hundred percent anti-money laundering

1 compliant in 2014, could you?

2 **A.** No.

3 **MR. CHOU:** Could we please publish what's been  
4 admitted into evidence as Exhibit 1087.

5 And could we please first highlight the metadata.

6 **Q.** Mr. Min, have you ever reviewed this email dated  
7 November 6, 2014?

8 **A.** No.

9 **MR. CHOU:** If we could zoom out.

10 And then if we could zoom in on the second paragraph below  
11 Point 2.

12 **Q.** Do you see where Mr. Andrade wrote in November of 2014  
13 that Aten Coin is the first digital currency that is a hundred  
14 percent anti-money laundering compliant?

15 **A.** (Witness examines document.) I do.

16 **MR. CHOU:** If we could take this exhibit down.

17 **Q.** Mr. Min, I want to direct your attention to May of 2015.

18 In May of 2015, in your opinion, Aten Coin was not  
19 entirely complete; correct?

20 **A.** May of 2015?

21 **Q.** Yeah, May of 2015.

22 **A.** Yeah. Portions of the application were complete, yes.

23 **Q.** Portions. But what about the whole thing? Is your expert  
24 opinion that the entire thing was correct or just -- was  
25 complete or just parts of it?

1 A. Parts of it. You wouldn't be able to tell based on the  
2 status of the code to build all of the relevant packages. With  
3 enough resources and time, I would be able to confirm that, but  
4 we would not be able to do so.

5 MR. CHOU: Could we please pull up what's been marked  
6 as Government Exhibit 349, which has been admitted into  
7 evidence and can be published.

8 Q. Mr. Min, have you ever reviewed this document before?

9 A. I don't recall the document.

10 MR. CHOU: And could we please zoom in on the date,  
11 which is in the first line of the first paragraph.

12 Sorry, no. The date of the press release, but this is  
13 fine too.

14 Q. You see where the date that appears in this document is  
15 May 25th, 2015?

16 A. I do.

17 MR. CHOU: And then could we please zoom in on the  
18 last paragraph, the quote that's attributed to Marcus Andrade.

19 Q. Mr. Min, do you see where this quote states [as read]:

20 "We set our bar very high and feel that our  
21 goals have not only been met for the Aten Black Gold  
22 Coin but exceeded"?

23 A. I do.

24 MR. CHOU: We could take this exhibit down, please.

25 Q. Mr. Min, I want to direct your attention to January of

1 2016, your opinions as to the code in that time period.

2 All right?

3 **A.** January 2016?

4 **Q.** January 2016.

5 **A.** Thank you.

6 **Q.** At that point in time, did you see any integration of  
7 Aten Coin into businesses?

8 **A.** I don't recall January 2016 specifically.

9 **Q.** Did you -- did you see any integration of Aten Coin as  
10 some sort of daily payment service?

11 **A.** No.

12 **Q.** And, in fact, earlier you testified on cross that you  
13 didn't see any Aten Coin blockchain transactions in the code  
14 that you were able to review; right?

15 **A.** Correct.

16 **MR. CHOU:** I'd like to please pull up what's been  
17 marked as Exhibit 673, which is admitted and in evidence.

18 If we can please jump to page 14 and publish page 14.

19 **Q.** So do you see how up at the top it says "Aten Coin, The  
20 Mature Digital Currency"?

21 **A.** Yes.

22 **MR. CHOU:** And if we could please zoom in on the  
23 third-from-the-bottom bullet point starting with "Integration  
24 into business."

25 **Q.** Do you see where this slide states [as read]:

1 "Aten Coin has attained key to success factors"?

2 And then there's a number of bullet points. One of them  
3 is [as read]:

4 "Integration into business that facilitates  
5 market liquidity."

6 **A.** Yes.

7 **MR. CHOU:** And zoom out.

8 Then if we can zoom in on the last bullet point there.

9 **Q.** Do you see where this slide states that [as read]:

10 "Aten Coin has attained acceptance as a daily  
11 payment service through the use of Aten Pay  
12 Services"?

13 **A.** Yeah. Yeah. These are all aspects of what I would have  
14 expected to see as far as the vision of the application and  
15 where they wanted to take it and ultimately be.

16 **Q.** Mm-hmm.

17 And from your review of the code, in January 2016,  
18 Aten Coin wasn't entirely complete; correct?

19 **A.** As testified to, aspects of the code were complete, but  
20 not the actual full application.

21 **Q.** Excuse me. My question was: In your expert opinion, as  
22 of January 2016, Aten Coin was not entirely complete; correct?

23 **A.** Based on my findings, no.

24 **MR. CHOU:** If we could take this exhibit down, please.

25 **Q.** I want to switch gears to AML BitCoin, Mr. Min.

1 During the October 2017 initial coin offering, AML BitCoin  
2 wasn't completed; correct?

3 A. Of what -- repeat the question.

4 Q. During -- in October of 2017 -- are you with me so far?

5 A. Yes.

6 Q. In October of 2017, based on your review, AML BitCoin did  
7 not appear completed; correct?

8 A. I wouldn't know. Based on the repositories reviewed, as  
9 far as the status of the completion of the tool, the aspects  
10 that were reviewed with regards to the actual application had  
11 aspects that did appear functional.

12 Q. But I want to circle back to the first part of your answer  
13 there. You said you wouldn't know?

14 A. I said that in regards -- I wasn't quite following. So  
15 apologies. So on October of 2017, if I know? I'm sorry.

16 Q. I want to -- sorry. I'll ask the question again.

17 I want to direct your attention to your opinion as to what  
18 the -- whether or not the code functioned -- AML BitCoin code  
19 functioned in October of 2017. With me so far?

20 A. Yes.

21 Q. During -- or in October 2017, in your opinion, AML BitCoin  
22 wasn't entirely completed; correct?

23 A. Correct.

24 Q. And I just want to direct your attention to a few months  
25 after that, so October 2017 and then January 2018.



1 In January 2018, AML BitCoin wasn't completed; correct?

2 A. I wouldn't know, no.

3 Q. And why wouldn't you know?

4 A. I didn't have the findings to understand that.

5 Q. Okay. And do you know whether or not AML BitCoin's  
6 initial coin offering was in October 2017?

7 A. I believe that's when it was, yes.

8 Q. And do you know whether or not Mr. Andrade sold  
9 AML BitCoin to Ben Boyer in January 2018?

10 A. Unaware of that.

11 Q. Lastly, Mr. Min, I want to direct your attention to May,  
12 May of 2018.

13 In May of 2018, AML BitCoin wasn't entirely completed;  
14 correct?

15 A. Portions of the application were complete. In building it  
16 out with the right team, in my opinion, it could have been  
17 complete; but, no, it was not complete.

18 Q. Okay. So just to make sure I got it right there, in your  
19 opinion, it could have been complete but it wasn't complete;  
20 correct?

21 A. Yeah. Based on the data and code that was provided,  
22 there's no way to really tell, to be able to spin it up  
23 completely with the amount of resources and time they've given.

24 MR. CHOU: Can I please just lastly pull up  
25 Exhibit 901, which has been admitted into evidence.

1 And can we please zoom in on the first four messages  
2 between these two individuals.

3 **Q.** So, Mr. Min, have you reviewed text messages or WhatsApp  
4 messages between Jack Abramoff and Marcus Andrade as part of  
5 your analysis?

6 **A.** No, sir.

7 **Q.** And do you see how the timestamp, as it appears on this  
8 document, is May 7th, 2018, or thereabouts?

9 **A.** I do.

10 **Q.** And do you see where somebody with the name of  
11 Jack Abramoff writes [as read]:

12 "Our price is dropping rather rapidly. Any  
13 ideas?"

14 **A.** I do.

15 **Q.** And do you say where somebody with Mr. Andrade's name  
16 writes at the bottom [as read]:

17 "As soon as market making kicks in, we'll be  
18 good to go"?

19 **A.** I do.

20 **MR. CHOU:** We can take this exhibit down.

21 **MR. STEFAN:** Your Honor, I'd object to the entire line  
22 of questioning and move to strike his testimony regarding those  
23 matters.

24 **THE COURT:** Why would this witness -- what was the  
25 reason for examining this witness about those documents?

1           **MR. CHOU:** To establish, Your Honor, that his basis  
2 for his opinion does not include the vast majority of admitted  
3 evidence in this case.

4           **THE COURT:** I'm going to grant the motion. I don't  
5 think that's the proper use of this witness.

6           **MR. CHOU:** Understood.  
7 One moment, Your Honor.

8           **THE COURT:** Yes.

9                               (Pause in proceedings.)

10          **MR. CHOU:** Nothing further, Your Honor.  
11 Thank you, Mr. Min.

12          **THE WITNESS:** Thank you.

13                               (Pause in proceedings.)

14          **THE WITNESS:** Oh, excuse me.

15          **THE COURT:** You're not done.

16          **THE WITNESS:** Oh, sorry. Excuse me.

17                               **REDIRECT EXAMINATION**

18          **BY MR. STEFAN:**

19          **Q.** Hello, Mr. Min.

20          **A.** Hi.

21          **Q.** I want to talk first about your engagement with  
22 Mr. Andrade's defense team in this case.

23               Are you familiar with the Criminal Justice Act Funding  
24 Program?

25          **A.** Criminal, yeah, Justice Association, I believe, yes.

1           **MR. CHOU:** Objection. Relevance.

2           **THE COURT:** Well, you opened the door by talking about  
3 King & Spalding and other issues of the like. So, overruled.  
4           Go ahead.

5           **BY MR. STEFAN:**

6           **Q.** So you can answer my question. Do you have some  
7 familiarity with what I was referring to, Criminal Justice --

8           **A.** Yes.

9           **Q.** -- the funding program?

10          **A.** Yes, sir.

11          **Q.** Just explain to the jury what that is.

12          **A.** Yes. Through the process of determining, you know, the  
13 analysis and what needs to be reviewed, a series of discussions  
14 would occur to formulate the plan of what's needed with  
15 review --

16          **Q.** Okay. Sorry. Sorry, Mr. Min. I'm going to redirect you  
17 a little bit.

18               How would you be funded in this case? How were you paid?

19          **A.** The CJA.

20          **Q.** The CJA, this is -- it's a system in place established by  
21 U.S. federal law -- right? -- that --

22           **MR. CHOU:** Objection, Your Honor.

23           **THE COURT:** Just if he knows how the funding works,  
24 you can ask him; but don't give him a lecture about the  
25 funding. If he knows, fine; if he doesn't, that's it.

1           **MR. CHOU:** The Government asks that the witness be  
2 allowed to finish his answer to the prior question.

3           **THE COURT:** Well, let's start with a new question.

4           **BY MR. STEFAN:**

5           **Q.** So the CJA, what is this funding source?

6           **A.** My understanding is it's Criminal Justice Association, the  
7 CJA.

8           **Q.** And where -- how are these funds -- what makes someone  
9 eligible for these funds?

10          **A.** I believe classifying the individuals as an expert in,  
11 you know, their applicable team.

12          **Q.** More specifically, the --

13          **THE COURT:** I don't know if this witness is the  
14 witness to ask these questions. You can try one more, but I  
15 don't think he's getting your point here, but go ahead.

16          **BY MR. STEFAN:**

17          **Q.** When you were doing work on this case, were you paid your  
18 normal rate?

19          **A.** No.

20          **Q.** About how much of a cut, as a percentage, did you take off  
21 your normal rate?

22          **A.** At least 75 percent.

23          **Q.** 75 percent off of what you normally charge?

24          **A.** Excuse me. Bad math. Yeah, my normal rate is roughly 810  
25 an hour.

1 Q. And how much were you paid on this case? I think you said  
2 250?

3 A. 250 an hour.

4 Q. So why did you -- what was your understanding of why you  
5 could only collect \$250 an hour on this case?

6 A. As it was funded through the CJA.

7 Q. Okay. And the CJA is a program for indigent clients, is  
8 that correct, people who can't afford, you know, normal  
9 representations?

10 A. Yes.

11 Q. Do you understand that to be the case?

12 A. Yes, I do.

13 Q. Is that the reason that you were taking this reduced rate,  
14 was that you were doing the work on behalf of a firm  
15 representing an indigent client?

16 A. Yes.

17 Q. Is FTI short of work?

18 A. No.

19 Q. Did FTI feel a desperate need to take this case and work  
20 on behalf of King & Spalding's defense of Mr. Andrade?

21 A. Yeah. FTI regularly takes pro bono cases even.

22 Q. So in this case, what was the motivation on your part for  
23 participating in this representation --

24 MR. CHOU: Objection. Relevance. Motivation.

25 THE COURT: Overruled.

1 Go ahead.

2 **THE WITNESS:** Do you mind repeating the question,  
3 please?

4 **BY MR. STEFAN:**

5 **Q.** Why participate with King & Spalding in representing  
6 Mr. Andrade on a case where you're making, well, \$600 an hour  
7 less than you normally would?

8 **A.** Yeah. My understanding, it's an application that was a  
9 great idea. It was a great function. It would absolutely  
10 benefit the cryptocurrency industry. It seemed to be that the  
11 initial review, that the aspects were there as far as the  
12 development. You know, as far as the ability to essentially  
13 help in this case, I felt a duty to do so.

14 **Q.** You talked about how you worked with a team of other  
15 people on this case; is that right?

16 **A.** Yes, sir.

17 **Q.** And about -- a little bit about your own background and  
18 your role at FTI. Is your role at FTI as a programmer?

19 **A.** No, it's not.

20 **Q.** Have you ever had that kind of role?

21 **A.** No, I have not.

22 **Q.** What is your role specifically as a director?

23 **A.** Forensic investigation.

24 **Q.** And can you describe the kind of duties or  
25 responsibilities you'd have in that role?

1   **A.**   Yeah. Managing our clients, coordinating the aspects for  
2   a given investigation and analysis, figuring out the  
3   determining -- the aspects that needed to be to prove specific  
4   aspects of the case, working with my team of investigators who  
5   range from various aspects of experience and background as  
6   experts in the space, and leveraging them to essentially be  
7   available to support the matter.

8   **Q.**   When it comes to the nitty-gritty of analyzing source code  
9   and getting to the bottom of programming issues, what are you  
10  doing in those circumstances?

11  **A.**   Yeah. I'm working with my team of very experienced  
12  developers, developers that have worked in the space for over  
13  20 years. You know, they're very, very good at what they do.  
14  They understand the ins and outs of the code. They work with  
15  me as, you know, the investigator and testifying expert to  
16  opine to those, you know, aspects learned through the  
17  investigation and analysis and sit here today in front of the  
18  jury.

19  **Q.**   What kind of work have you done specific to blockchain or  
20  cryptocurrency outside of investigative work like what you did  
21  in this particular case?

22  **A.**   Yes. Routinely perform technical and operational-type  
23  assessments in an advisory capacity for, you know -- for  
24  cryptocurrency native, you know, companies. You know, various  
25  clients include, you know, exchange companies, manage custody,



1 wallet custody companies, to essentially look at their overall  
2 protocols, procedures, their operations, review those with  
3 them, essentially a -- sort of a cybersecurity audit for  
4 blockchain.

5 Q. About how many companies do you think you've performed  
6 this kind of work for?

7 A. In an advisory capacity, I'd say 20.

8 Q. Is FTI cheap?

9 A. No.

10 Q. Have you had return clients out of these companies? Have  
11 companies come back to you --

12 A. Absolutely.

13 Q. -- repeatedly for your work?

14 A. Yeah. Within our segment, in our specific blockchain  
15 digital access practice, as well as across the firm, to any  
16 various capacity that an expert opinion or investigation is  
17 needed or advisory capacity work as well.

18 Q. You'd mentioned on cross-examination that you had two  
19 other people working with you on this team for the AML BitCoin  
20 review and Aten Coin review; is that right?

21 A. Yes.

22 Q. Who are those people?

23 A. Yeah. One is Sam Davies. He's out of our London office.  
24 And Anup Gupta was a contractor that worked within our  
25 practice.

1 Q. What does Sam Davies do?

2 A. Sorry?

3 Q. What does Sam Davies do?

4 A. He's a managing director.

5 Q. And can you describe his role and particularly his skill  
6 sets when it comes to --

7 A. Correct.

8 Q. -- the work that he was doing in this case?

9 A. Yeah. He's a programmer at heart. He's been working  
10 with, you know, development for software over the course of his  
11 career. He's got an extensive background experience set. He's  
12 prior Big Four, performing advisory capacity for source code  
13 and different types of applications and making them better,  
14 essentially.

15 Q. Sorry. What's Big Four?

16 A. The accounting firms: Deloitte, KPMG, and the likes.

17 Q. Okay. And the second individual you mentioned?

18 A. Yeah. Anup.

19 Q. Yes. Can you --

20 A. Yeah. Anup's a programmer, a blockchain-specific  
21 programmer. He -- we were consulting with that firm on a  
22 series of different investigations as well as an advisory  
23 capacity, writing source code for their projects, and we  
24 utilized Anup's, you know, expertise to assist in the  
25 investigation.

1 Q. When you were forming your opinions in this case, did you  
2 rely in part on the work of your colleagues on this team?

3 A. Absolutely.

4 Q. Have you considered the -- well, do you have a history of  
5 working with them?

6 A. I do.

7 Q. And have you been satisfied with their performance in  
8 previous cases?

9 A. Absolutely.

10 Q. Has that been relied on by clients, paying clients, of  
11 FTI?

12 A. Yes.

13 Q. You said you billed about a hundred hours maybe to this  
14 point on this case.

15 A. Yeah. I believe so, yeah.

16 Q. So at \$600 a loss per hour, what are you looking at in the  
17 damages department for your participation in this case?

18 MR. CHOU: Objection. Misstates the testimony. Loss.

19 THE COURT: Sustained.

20 BY MR. STEFAN:

21 Q. Have you taken a significant reduction in the amount of  
22 proceeds that you would normally bring to FTI in participating  
23 in this case?

24 A. Yes, sir.

25 Q. I want to talk about the issues that Mr. Chou raised with

1 respect to the timestamps in the Git Bucket -- pardon me -- the  
2 Bitbucket repository that you reviewed.

3 **THE COURT:** Actually, before you go into that, we had  
4 a couple of breaks, so I don't want to have a long break, but I  
5 do think I'll give you one more before we get all the way to  
6 1:30.

7 So let's take a break now, and let's try to keep it to  
8 about ten minutes. Remember my admonitions. Don't discuss  
9 this amongst yourselves or with anyone else.

10 And we'll see you shortly.

11 (Recess taken at 12:20 p.m.)

12 (Proceedings resumed at 12:33 p.m.)

13 (Proceedings were heard in the presence of the jury.)

14 **THE COURT:** The jury is present.

15 Mr. Stefan, you may proceed.

16 **BY MR. STEFAN:**

17 **Q.** Mr. Min, I was turning to the timestamps that went --  
18 Mr. Chou went over with you before.

19 Mr. Chou went over with you maybe -- I don't know -- ten  
20 of the timestamps, total, that you discussed in your direct  
21 examination --

22 **A.** Yes.

23 **Q.** -- right?

24 This is of the 40,000 or more than 40,000 timestamps that  
25 you saw in the Bitbucket repository; right?

1 A. Yes. Within the database, yeah.

2 Q. 40,000 that were dated between 2017 and 2018?

3 A. That is correct.

4 Q. And you said that it would be highly unlikely, in your  
5 view, that all of these would be fabricated or made up; right?

6 A. Yes.

7 Q. I mean, why would that be the case?

8 A. Yeah. You know, in that specific demonstrative, the table  
9 that had the various timestamps, you have an assortment of  
10 different formats for a date and a time. The database as well,  
11 specifically the CrossVerifyDB.sql database, has its own  
12 unique, you know, timestamp format.

13 The amount of effort to go through that process to update  
14 all these different aspects, you would take a considerable  
15 amount of time to formulate that. The -- the Gradle Wrapper  
16 are programmatic functions to update those timestamps.  
17 You know, with those, you would have to update it every time,  
18 you know, to continue to have it to be that specific one.

19 So, for instance, if, you know, let's say January 1 of  
20 2017 an update had occurred and then, after that, say in, you  
21 know, June of 2017, someone made an edit to it manually, the  
22 update would have -- from the Gradle Wrapper would have changed  
23 it as well.

24 Q. So, I mean, you have an issue with the programmatic times  
25 being what the programmatic times are; right?

1 A. Yes.

2 Q. Would you then have to basically amend them every single  
3 time you made an amendment anywhere else in the --

4 A. Right.

5 Q. -- in the timestamps?

6 A. Yeah. For any of those programmatic ones, you'd have to  
7 do it every time.

8 Q. About how many of those programmatic ones existed within  
9 the times stamps you reviewed?

10 A. There's quite a few. I don't remember exactly the number,  
11 but there were quite a few.

12 Q. Some number of the total of the 40,000?

13 A. Right.

14 Q. And with respect -- sorry. Were you --

15 A. No.

16 Q. With respect to the amount of work involved, what would be  
17 required of an individual to go and make these sorts of  
18 amendments? And, more importantly, how could it be done  
19 without being detected?

20 A. Yeah. You'd have to have a sophisticated programming,  
21 you know, capability to do that in a way that would be  
22 automated. You've got various files throughout the  
23 repositories as well that you'd have to locate. So you would  
24 have to search and find those specifically for, say, a time  
25 frame, for an example, in 2019, and then account for any

1 various aspects of that timestamp format and essentially have  
2 it programmatically change it.

3 Q. Did you observe any evidence within the GitHub -- pardon  
4 me -- the Bitbucket repository that you reviewed that  
5 timestamps in that repository had been edited?

6 A. Yeah. No, I had not. I would expect to see an error or  
7 something that would be off across the board, and it just  
8 seemed very odd that, you know, it's very specific population  
9 of files, you know, and not a broader sense. If you were going  
10 to make that change, why wouldn't you just change, you know,  
11 multiple repositories, multiple timestamps, you know, to better  
12 your overall position?

13 Q. You also spoke to getting the GitHub repository access in  
14 this case from King & Spalding.

15 A. I did.

16 Q. Which got the access from Mr. Andrade?

17 A. Correct.

18 Q. Is it possible, to your knowledge, to edit entries in a  
19 GitHub repository or a Bitbucket repository without being  
20 detected?

21 A. No.

22 Q. Is it just out of the question in that case?

23 A. Yeah. The metadata would show so, and then the actual  
24 account associated with the change would have been tracked.

25 Q. Did you have any reason to question the commit data that

1 was provided to you in the Bitbucket repository that was handed  
2 by Mr. -- well, by King & Spalding access to you?

3 A. No, sir.

4 Q. With respect to the first commits that appeared in late  
5 2018, these were commits of millions of lines of code; is that  
6 right?

7 A. Yes.

8 Q. Too large, too many lines of code to reasonably be  
9 included in the number of commits that were provided -- the  
10 number of commits that they were uploaded in?

11 A. Yeah, correct.

12 Q. Do people change repository sources sometimes?

13 A. With regard to?

14 Q. Like move from a GitHub to a Bitbucket, say.

15 A. Yeah, absolutely. Yeah, it's a common practice. I mean,  
16 even just the nature of the development process, you wouldn't  
17 edit files within the Git repository. You would take them down  
18 local, make your edits, and then you would push them back up to  
19 the commits.

20 In addition, if you've got multiple, you know, teams  
21 engaged on the project, say you have Team 1 that's working on  
22 this aspect for, say, the biometric function and then,  
23 you know, they are essentially taken off the project and  
24 replaced, you know, they would have their own account as well.  
25 So you would have a change from account to account for



1     respective teams even.

2     **Q.**   Is it possible that in that process, commit history could  
3     be lost in transferring from some repository to another?

4     **A.**   Yes.  I think we've seen that as far as Aten Coin  
5     specifically, that that has occurred.

6     **Q.**   And do you think that you see that specifically with  
7     regard to the Bitbucket repository commits that start in  
8     November of 2018 -- or December of 2018, that we've lost  
9     history before that --

10    **A.**   Yes.

11    **Q.**   -- in the process of a transfer of a prior repository into  
12    the Bitbucket repository?

13    **A.**   Correct.

14    **Q.**   I want to talk about some of the information that could  
15    potentially have been lost within that transfer.

16           Are you familiar with the fact that Mr. Andrade had a team  
17    in London working on the CrossVerify project?

18    **A.**   Yes.

19    **Q.**   Did you know that Evan Carlsen was one of the people --  
20    Mr. Chou mentioned him on cross-examination -- Evan Carlsen was  
21    one of the people that Mr. Andrade had hired to work with him  
22    on the AML BitCoin project?

23    **A.**   Yeah.

24    **Q.**   Did you know that the CrossVerify team in London comprised  
25    of about six or seven people?

1 A. I don't know the exact number, but I know that he had a  
2 team.

3 Q. And did you know that in the fall of 2018, Evan Carlsen  
4 visited the CrossVerify team in London?

5 A. I'm unaware.

6 MR. CHOU: Objection. Leading.

7 THE COURT: On redirect, you can -- and it's an expert  
8 witness. He can do some leading.

9 Go ahead.

10 BY MR. STEFAN:

11 Q. Did you know that Evan Carlsen visited that team in  
12 London?

13 A. I don't recall.

14 Q. Along with a gentleman named Hung Tran?

15 A. Yes, that name ring- -- is familiar.

16 Q. Did you know that Hung Tran also visited the CrossVerify  
17 team in London with Mr. Evan Carlsen?

18 A. I don't know specifically, yeah.

19 Q. That's okay.

20 Are you aware that at that time, Evan Carlsen expressed  
21 that he was very pleased with the CrossVerify product?

22 A. I do recall that.

23 Q. And with the progress of the CrossVerify team in London?

24 A. Yes.

25 Q. And that was in the fall of 2018?

1 A. Yes.

2 MR. CHOU: Objection. Foundation. The witness wasn't  
3 here for Mr. Carlsen's testimony.

4 THE COURT: Overruled.

5 Go ahead.

6 BY MR. STEFAN:

7 Q. You're not aware of how much of the code that you have  
8 available to you from that London team?

9 A. I do not.

10 Q. And it appears based on the history of the GitHub -- or  
11 the Bitbucket repository, that information is missing; right?

12 A. Yes.

13 Q. Particularly that information that was developed between  
14 2017 and 2018 --

15 A. Yes, sir.

16 Q. -- by these six or seven developers in London?

17 And the material that Evan Carlsen was impressed by, it's  
18 possible that that wasn't in the information that was relayed  
19 to you and your team?

20 A. Correct.

21 Q. And are you familiar -- I think you did testify that  
22 you're familiar with this NuGen team as well.

23 A. Yes.

24 Q. And this was a team in India; right?

25 A. Yes.

1 Q. You saw some of the information related to their work in  
2 the repository that you got timestamps from; right?

3 A. Yes.

4 Q. However, that repository isn't complete when it comes to  
5 what you would expect to see from a full Bitbucket repository  
6 download of the 2017 and 2018 timestamped information; is that  
7 right?

8 A. Yes, that's right.

9 Q. You can't speak to the total sum of all the work that they  
10 performed in the 2017-2018 time period?

11 A. No, sir.

12 Q. Or know how much Mr. Andrade paid them to perform that  
13 work?

14 A. No, sir.

15 Q. Did you know that it was many thousands and thousands of  
16 dollars that he paid that NuGen team?

17 A. I do recall an email mentioning something about paying the  
18 team, acquiring a budget; but that's -- I don't have specifics.  
19 But, yeah, it was a considerable amount of money, if I recall  
20 correctly.

21 Q. Are you aware that the CrossVerify team visited the  
22 United States at some point in the development process and  
23 actually showed a demo of what they were working on?

24 A. Yes.

25 MR. STEFAN: And I want to see if we can display

1 Exhibit 3202, please.

2 Ed, if you can pull that up and please go to the -- go to  
3 the second page.

4 Zoom in on the -- the paragraph beginning with "The  
5 product is developing nicely and on time."

6 Is this being displayed to the jury?

7 **MR. CHOU:** Objection, Your Honor. I think this is the  
8 unredacted version of this exhibit.

9 **THE COURT:** It better not be.

10 Don't use a document -- first of all, let's take it down  
11 from the jury's view.

12 **THE COURTROOM DEPUTY:** I didn't.

13 **MR. STEFAN:** Apologies, Your Honor.

14 Can I just see the first page for the judge and the  
15 parties only.

16 **THE COURT:** Right. And just going forward, this is  
17 not the vehicle to just put up all sorts of exhibits in this  
18 case and just ask this witness. I mean, he's an expert  
19 witness. He's not a fact witness. So let's not just review  
20 every fact in this case and ask him if he knows it.

21 **MR. STEFAN:** Understood, Your Honor.

22 **Q.** Were you aware that in October of 2018, Mr. Richard Naimer  
23 informed Mr. Marcus Andrade that the product -- CrossVerify  
24 product was developing nicely and was on time?

25 **MR. CHOU:** Hearsay. Outside the scope.

1           **THE COURT:** I'll allow it.

2           Go ahead, if you knew.

3           **THE WITNESS:** Yes.

4           **MR. STEFAN:** All right. Can we show, please, the  
5           Defense Demonstrative Slide 1.

6           **Q.** I want to talk about some of the findings -- return to the  
7           findings that you made in the course of your review in this  
8           case and some of the things that Mr. Chou said about them.

9           With respect to the Aten Coin software, you previously  
10          testified that it appears to have been a complete functional  
11          product that relied on third-party software for ID  
12          verification; right?

13          **A.** Yes.

14          **Q.** You weren't able to actually review the third-party  
15          software for its veracity; right?

16          **A.** Right.

17          **Q.** You couldn't run tests on the third-party software to  
18          speak to how good that piece of the product was?

19          **A.** Correct.

20          **Q.** That wasn't Mr. Andrade's product?

21          **A.** That's correct.

22          **Q.** It was connected to his product?

23          **A.** Yes.

24          **Q.** So if Homer Simpson was verified by a third-party ID  
25          verification service, that says nothing about what Mr. Andrade

1 did with the Aten Coin source code; is that right?

2 A. Yes.

3 Q. And just specifically the Aten Coin, when we're talking  
4 about a complete functional product, on direct examination you  
5 talked about some of the things that cryptocurrency that would  
6 function would have; right?

7 A. Yes.

8 Q. And correct me if I'm wrong, but you've got to have a  
9 blockchain; right?

10 A. Yes.

11 Q. And wallet?

12 A. Yes.

13 Q. And basically an ability for that wallet to actually  
14 interact with the blockchain?

15 A. Yes.

16 Q. And in the case of Aten Coin, it had all of these features  
17 as far as you could tell based on the source code that you  
18 reviewed?

19 A. Yes.

20 Q. And you were able to get at least one of those features,  
21 the wallet application, up and running despite a ten-year gap  
22 in time since it was originally made?

23 A. Yes, sir.

24 Q. You did that using the source code that Mr. Andrade's team  
25 had created?

1 A. Yes, sir.

2 Q. And you saw specific evidence that the third-party ID  
3 verification services were integrated with that source code?

4 A. Yes, sir.

5 Q. With respect to the AML BitCoin, correct me if I'm wrong,  
6 but you did not testify today that the AML BitCoin product was  
7 a complete product in the time frame that you had reviewed?

8 A. I'm sorry. Repeat the question.

9 Q. You didn't testify that the AML BitCoin was a complete  
10 product in the time that you reviewed or that it was finished;  
11 right?

12 A. Correct.

13 Q. You spoke to, instead, consistent work by intelligent  
14 developers working on the CrossVerify and AML BitCoin projects  
15 throughout 2017-2018?

16 A. Yes. Correct.

17 Q. That is spoken to, in your view, by the quantity of the  
18 source code that was generated; is that right?

19 A. Yes, sir.

20 Q. I think you had said some 16.5 million lines of code?

21 A. Yes, sir.

22 Q. You're not aware of how many of those code lines were  
23 blank off the top of your head?

24 A. No.

25 Q. I mean, how many, based on your experience or your review,



1 could you even estimate may have been blank out of those?

2 **THE COURT:** You can do some leading, but not at the  
3 level you're just doing it. So...

4 **MR. STEFAN:** Understood, Your Honor.

5 **Q.** Were most of the lines blank?

6 **A.** No.

7 **Q.** And when you spoke to intelligent people working on the  
8 project, why? Why do you have that impression based on the  
9 code that you reviewed?

10 **A.** I'm sorry. The question?

11 **Q.** Why did you have the impression that intelligent people  
12 worked on this product from the code that you reviewed?

13 **A.** Yeah. In review of the code -- excuse me -- with respect  
14 to Aten Coin particularly, you had extremely well-documented  
15 aspects of the project, and we were able to spin this code up  
16 as discussed.

17 The Aten Black Gold Coin wallet is over ten years old, and  
18 using their specific instruction, I was able to spin that  
19 portion of the application up to see all the functionality that  
20 I'd shown through my demonstratives.

21 The integration of that ID verification aspect for  
22 Aten Coin specifically is extremely, you know, sophisticated.  
23 You know, the code base is sophisticated. The integration of  
24 blockchain is a whole 'nother component that is not a simple  
25 endeavor, and to pull that off in the way that appears that

1 they have done is extremely telling.

2 Q. And, finally, with respect to CrossVerify, the state of  
3 the product, as you saw it, was such that it could be  
4 integrated with a preexisting cryptocurrency in a matter of a  
5 few months?

6 A. Yes.

7 Q. Mr. Chou had indicated in direct examination that,  
8 you know, you're working for an international law firm King &  
9 Spalding; right?

10 A. Yes, sir.

11 Q. Did your relationship or the fact that you were working  
12 with King & Spalding have any impact at all on your testimony  
13 today?

14 A. No.

15 Q. Did that -- did that slant your opinion because you were  
16 working with King & Spalding at a \$600 discount per hour?

17 A. No.

18 MR. STEFAN: May I have a moment, Your Honor?

19 THE COURT: Yes.

20 (Pause in proceedings.)

21 MR. STEFAN: Thank you.

22 I don't have further questions, Mr. Min.

23 THE COURT: Very brief, Mr. Chou.

24 \\\

25 \\\

RECROSS-EXAMINATION

**BY MR. CHOU:**

**Q.** Very briefly, Mr. Min.

**A.** Yes, sir.

**Q.** You testified on redirect that you thought that AML BitCoin and Aten Coin was a good idea. Did I get that right?

**A.** Yeah. Yes, sir.

**Q.** And you're also billing \$250 an hour to the work in this case; correct?

**A.** Yes.

**Q.** You also stated on redirect that based on what you reviewed and what you were told, that you believed in the AML BitCoin/Aten Coin project. Did I get that right?

**A.** That I believed -- I didn't catch the question.

**Q.** You testified on redirect that based on what you reviewed and what you were told by the defense team, that you believed --

**MR. STEFAN:** Objection.

**BY MR. CHOU:**

**Q.** -- in the project.

**MR. STEFAN:** Misstates what he stated on redirect. He didn't say anything about the defense team informing him.

**THE COURT:** Okay. Overruled.

Just answer the question.

1 **BY MR. CHOU:**

2 **Q.** Mr. Min, did you testify on redirect that you believed in  
3 the AML BitCoin/Aten Coin project?

4 **A.** Yeah. The purpose of these coins and these wallets in  
5 decreasing the potential of anti-money laundering is a  
6 significant task. You know, cryptocurrencies have gotten a bad  
7 rap. Yes, there are rampant fraud that takes place by cyber  
8 criminals, for instance.

9 Being able to leverage, you know, an application like  
10 AML BitCoin that is taking the extra step to validate a user to  
11 confirm that transaction is something that is intended,  
12 you know, by the owner of those currencies is absolutely  
13 necessary for the purposes of getting cryptocurrency -- you  
14 know, this blemish on its overall reputation removed and moving  
15 into a new era that is completely open and secure.

16 **Q.** The people who invested in Mr. Andrade's project believed  
17 in it too, didn't they?

18 **A.** I don't know --

19 **MR. CHOU:** Nothing further.

20 **THE WITNESS:** -- what the question is.

21 **THE COURT:** Very well. You may step down.

22 **THE WITNESS:** Thank you.

23 (Witness excused.)

24 **MS. DIAMOND:** The defense will call Dr. Levi Armstrong  
25 to the stand.

1 (Witness enters the courtroom and steps forward to be sworn.)

2 **THE COURT:** If you could come forward, please, and  
3 take the stand.

4 **MS. DIAMOND:** Sit right up there. Get yourself  
5 settled. You'll be sworn in.

6 **THE COURTROOM DEPUTY:** Please raise your right hand.

7 **LEVI ARMSTRONG, Psy.D.,**  
8 called as a witness for the Defendant, having been duly sworn,  
9 testified as follows:

10 **THE WITNESS:** Yes, I do.

11 **THE COURTROOM DEPUTY:** Can you state your name and  
12 spell your last name?

13 **THE WITNESS:** Dr. Levi Armstrong. My last name is  
14 A-r-m-s-t-r-o-n-g.

15 **DIRECT EXAMINATION**

16 **BY MS. DIAMOND:**

17 **Q.** Thank you.

18 Dr. Armstrong, I'm going to ask you when you speak, to  
19 speak directly into the microphone. They're good microphones.  
20 They won't give you a lot of feedback. And that way, the jury  
21 will be able to hear you clearly.

22 Could you please tell the jury what you do for a living?  
23 What is your profession?

24 **A.** So I am a clinical neuropsychologist where I have been in  
25 private practice now for ten years and primarily focusing on

1 the biological bases of behavior and the assessment of that.

2 **Q.** Did you have any special education as part of your  
3 training in your profession?

4 **A.** So in order to be a neuropsychologist, you have to have  
5 first a bachelor's degree; and then part of my training -- and  
6 not all training -- but after my bachelor's, I have a master's  
7 degree in psychology and a Psy.D, or a doctorate, of clinical  
8 psychology, which is the equivalent to Ph.D. in psychology.  
9 And that's --

10 **Q.** And where -- if I may, where did you receive your degrees?  
11 If you just tell the jury.

12 **A.** Sure. So my bachelor's was from Texas A&M University in  
13 College Station; and then the master's was through the  
14 University of the Rockies, which then was also where I earned  
15 my doctorate in neuropsych or clinical psych.

16 **Q.** After you received your doctorate, did you do any other  
17 special training in your field to help your work in  
18 neuropsychology?

19 **A.** I did.

20 **Q.** Could you tell the jury, please?

21 **A.** So after my doctorate, I had to complete a two-year  
22 postdoctoral residency, or sometimes called a fellowship, under  
23 the supervision of a board-certified neuropsychologist; and,  
24 thankfully, he was from Tyler, Texas, which is not too far from  
25 my hometown in Paris, Texas.

1 But after my two-year residency, I -- I don't know how I  
2 did it because I've got a 10 and a 7-year-old, but I went back  
3 to school and earned my postdoctoral master's in clinical  
4 psychopharmacology, which is essentially very similar in  
5 curriculum to the first couple of years of med school.

6 It allows, with that degree and passing of a couple of  
7 tests and some other things, allows me to prescribe in certain  
8 states. In Texas, I -- it's not -- we don't have that scope of  
9 practice. And so I earned that primarily because, as a  
10 neuropsychologist, we deal so much with, you know, the biology,  
11 it just -- I learned along the way that without having that  
12 training in the whole system of the body, it was -- it  
13 didn't -- it didn't make much sense to only know about the  
14 brain because the whole body's connected.

15 **Q.** Did you do hours of supervised work prior to getting your  
16 Ph.D. as part of the curriculum or the regime to get your --  
17 forgive me. I said Ph.D. You said it was a Psy.D. That's  
18 P-s-y, dot, D; is that correct?

19 **A.** That's correct.

20 **Q.** Did you do any sort of practice hours or practicum hours,  
21 hours of counseling, hours of work under supervision; and if  
22 so, how many?

23 **A.** For the master's and the doctorate combined ended up being  
24 right around 2,000 hours of supervised practicum unpaid, and I  
25 always -- yeah.

1 And then 2,000-hour predoctoral internship that -- that's  
2 whenever my wife and I moved back down to Texas, to Dallas to  
3 do that, and that was -- and then I graduated after that.

4 Q. So that was 4,000 hours prior to receiving your doctorate?

5 A. Correct.

6 Q. And then after receiving your doctorate, did you then do  
7 some additional amount of hours, either as part of your  
8 clinical psychopharmacology degree or to otherwise further your  
9 training?

10 A. Sure. So in the state of Texas, in order to be licensed  
11 as a psychologist, you have to have an additional 2,000 hours,  
12 after your doctorate, of supervised experience. In order to  
13 call yourself a neuropsychologist, though, you've got to have  
14 an additional year on top of that. So it was a total of  
15 4,000 hours after my doctorate of supervised experience.

16 Q. And are you currently in private clinical practice?

17 A. I am, yes.

18 Q. And besides your clinical practice, do you currently do  
19 forensic work?

20 A. I do.

21 Q. Could you explain to the jury the difference, please?

22 A. Sure. So clinical neuropsychology is the application of  
23 our expertise for the -- for, ultimately, the purpose of  
24 differential diagnosis so that we can identify the best course  
25 of treatment.



1 And neuropsychologists are often referred to by  
2 specialists. I get referred patients a lot from neurology and  
3 from psychiatry when there's a complicated question of a  
4 diagnosis, where they're not sure exactly what diagnostically  
5 we're looking at.

6 And so I'll get a referral, allowing me to administer  
7 various tests and use my training and expertise, where they  
8 don't have that training and expertise, and kind of team up  
9 with them, giving them my insights and ideas about what I think  
10 is going on diagnostically.

11 Q. So just to paraphrase, lesser-trained psychologists  
12 sometimes will consult with you because your training is  
13 greater than theirs to help them figure out what's going on  
14 with the mind or the brain of one of their patients?

15 A. Sure.

16 Q. Did I get that right? If not --

17 A. I would say lesser trained in the sense of differently  
18 trained. Like clinical psychologists will refer to  
19 neuropsychologists mainly because they don't have the  
20 brain-behavior relationship training or education. And most of  
21 them will do testing, but they aren't ethically allowed to  
22 administer neuropsych tests or at least interpret them in the  
23 same way that we can from a biological standpoint, yeah.

24 Q. In addition to doing forensic work for other practicing  
25 clinicians, have you done forensic work for attorneys or courts

1 before today?

2 **A.** I have. And the only reason why I'm kind of smiling on  
3 that is because I didn't become a neuropsychologist to be a  
4 forensic neuropsychologist. I was informed along the way that  
5 because of our specialty, we end up here frequently.

6 And with the training that I had, one of my previous  
7 mentors, who passed away not long ago, became a forensic  
8 neuropsychologist specifically; and so I began getting that  
9 experience in grad school, knowing that that was going to be  
10 coming my way at some point. And, lo and behold, since being  
11 in practice over ten years, it just started happening.

12 And then from there, obviously, the two years of my  
13 postdoc was supervised by that same mentor, by the way, who was  
14 a forensic neuropsychologist, gave me experience there. But  
15 it's about 10 percent of my practice.

16 **Q.** And when you've appeared before in courts as a  
17 professional forensic witness, have you appeared before working  
18 for the defendant in a case?

19 **A.** Can you restate that again? I'm not sure.

20 **Q.** Sure.

21 Has a criminal defense team ever hired you before today to  
22 work as a forensic expert?

23 **A.** Yes.

24 **Q.** And has the prosecution ever hired you before?

25 **A.** No.

1 Q. Have courts ever hired you to work as an expert on behalf  
2 of a court or a judge?

3 A. Yes.

4 Q. Could you tell the jury a little bit about what that work  
5 entails?

6 A. Sure. So in those cases, because where I practice is kind  
7 of on the border of rural versus the suburban sprawl of Dallas  
8 and in the rural areas there aren't very many specialists like  
9 that do what we do, and there's been a few referrals directly  
10 from the Court or the judge as a court-appointed expert for  
11 various cases related to either questions of diagnosis that the  
12 judge became aware of, it was just very obvious; or, you know,  
13 one side or the other had a question on diagnostics that seemed  
14 to kind of be a nowhere -- no man's land between neurology and  
15 psychology, and they learned that there's an actual  
16 subspecialty called neuropsychology.

17 Q. And, finally, turning in your experience to teaching, do  
18 you have teaching experience? And if so, could you please  
19 describe it to the jury?

20 A. I do. I have right at ten years of teaching as a full  
21 professor at a private Christian university in Dallas -- the  
22 Dallas area called Amberton University where I teach grad-level  
23 future prospective counselors diagnostics, psychiatric  
24 diagnostics, using the DSM-5, which is the gold standard  
25 diagnostic manual.

**ARMSTRONG - DIRECT / DIAMOND**

1 And I teach -- they allowed me to create two courses  
2 there, and I created the adult and geriatric psychopathology  
3 and treatment course and then the child and adolescent child  
4 psychology and treatment course.

5 And then with those two classes, I've got, like, a  
6 rotating -- I teach three classes every semester, and I've got  
7 one that rotates through, it's either lifespan development,  
8 counseling assessment, advanced counseling skills, and teaching  
9 on topics of neurodevelopment. Psychopharm is a big one these  
10 days for counselors. So, yeah.

11 **MS. DIAMOND:** Thank you.

12 Your Honor, I would offer Dr. Armstrong as a clinical and  
13 forensic neuropsychological expert.

14 **MR. HIGHSMITH:** No opposition.

15 **THE COURT:** All right. The witness will be so  
16 designated.

17 **BY MS. DIAMOND:**

18 **Q.** Dr. Armstrong, have you met my client, Marcus Andrade?

19 **A.** I have.

20 **Q.** What were the circumstances that you met -- under which  
21 you met my client?

22 **A.** I conducted a comprehensive neuropsychological evaluation  
23 of him.

24 **Q.** As part of your preparation for your testimony today, did  
25 you prepare some materials that may help the jury understand

1 what we're about to talk about?

2 **A.** I did.

3 **MS. DIAMOND:** Mr. Jackson, if we could display for the  
4 witness, the Court, and counsel, please, Exhibit 3394.

5 **Q.** And, Dr. Armstrong, I'd like you to take a look at the  
6 first page; and as you request, if necessary, we can scroll  
7 through the pages for you. Just when you've done that, let me  
8 know if this looks familiar.

9 **A.** (Witness examines document.) Yes, I'm familiar with this.  
10 This is the first page of the slides that I created.

11 **MS. DIAMOND:** Thank you.

12 Your Honor, request permission to use this as a  
13 demonstrative exhibit. We are not asking to admit it, but just  
14 to assist the jury.

15 **THE COURT:** You may.

16 **MS. DIAMOND:** Mr. Jackson, could you please display  
17 page 1 for the jury. Thank you.

18 **Q.** Dr. Armstrong, what is a neuropsychological evaluation?

19 **A.** That's a great question. One of the best ways of  
20 describing it is one of the most comprehensive ways to assess  
21 someone from a psychological and neurobiological standpoint.  
22 The reason why I say "the most comprehensive" is because it  
23 encompasses both a clinical psychological evaluation in  
24 addition to the administration of several more tests that  
25 specifically measure different parts of the brain and different

1 networks in the brain.

2 In general, neuropsychological evaluation includes usually  
3 about between 45 minutes and an hour-and-a-half diagnostic  
4 clinical interview. And really what that is, is where I meet  
5 with the patient, walking through what their chief complaints  
6 might be. And what that means is why they're there, what  
7 difficulties they have in life, walking through their history,  
8 their medical history, and so forth.

9 And then during that time, I'm also observing them. And,  
10 you know, it's not that I'm not analyzing them, you know, like  
11 my family might be worried about when I go back home; but I'm  
12 observing their behaviors and putting it kind of all together  
13 where after that interview, I've started formulating a  
14 hypothesis of different diagnoses that might be present.

15 And based on that hypothesis, I'm going to use what's  
16 called a fixed flexible approach to my test battery. And  
17 that's a real specific term in my field that means we've got an  
18 outline plan of tests that we give to everybody where we remain  
19 flexible to be able to add to those tests or take away from  
20 those tests.

21 You know, the reality is, is managed care has changed more  
22 about medicine, in my field anyway, probably more so than even  
23 theory has at times; and so I think one of the best responses  
24 we've had as a profession in my area is the ability to be more  
25 flexible like that, because it used to be 12-something hours

1 for every single person that came through. And it didn't  
2 matter if you had dyslexia or severe traumatic brain injury,  
3 you got just 12 hours of battery of tests.

4 **Q.** And is that the former method or the fixed flexible  
5 method?

6 **A.** That's the former method.

7 So the fixed flexible method is obviously a more efficient  
8 way of doing it but still captures the same things that those  
9 long batteries would capture; and using updated norms, that we  
10 can -- we have ways of analyzing test data that you don't have  
11 to have all 12 hours like that anymore.

12 And so anyway, with the evaluation, after we administer  
13 those tests and score them, the next part there -- and it's not  
14 always in this order but -- is reviewing collateral records or  
15 input whenever it's available. Ideally, the more records, the  
16 better; but when evaluating an adult, it's a challenge often to  
17 get, you know, records from preschool. Some disorders,  
18 diagnoses, those things are more or less important; but  
19 ideally, we are also incorporating some records.

20 **Q.** And are you familiar with the part of Texas where  
21 Mr. Andrade came from?

22 **A.** I'm familiar. I didn't grow up in that area, but I am  
23 familiar with the rural nature of Texas because we would often  
24 go on vacations down there on the coast of the beautiful ocean  
25 of Texas down there. That's not true. I'm sorry. But we

1 would go on vacation down there, and so I am aware of the  
2 culture and the educational, you know, upbringing that we all  
3 had during that time.

4 **Q.** When Mr. Andrade would have been a schoolchild in  
5 elementary school in Texas, to your knowledge, would there have  
6 been counselors and awareness among the educators such that he  
7 might have -- records might have been kept of any symptoms of  
8 any neurological disorder, to your knowledge?

9 **A.** At his age, just knowing what I know about Texas, I would  
10 not have a lot of --

11 **MR. HIGHSMITH:** Your Honor, I'm going to object just  
12 because there's not -- there's insufficient foundation. It  
13 seems like he's going down a road where he doesn't really have  
14 foundation to answer this.

15 If they want to delve into his understanding of Texas  
16 20 years ago, fine, but to just spout off opinions without a  
17 basis --

18 **THE COURT:** Okay. I got it.

19 Yeah, I don't think -- anecdotal stuff about Texas, you  
20 need to -- if this is where you're going, you need to have a  
21 bit more foundation.

22 **MS. DIAMOND:** No problem. Thank you, Your Honor.

23 **Q.** Did you receive any school records related to Mr. Andrade  
24 to review?

25 **A.** I did not.



1 Q. Did you see -- did you receive some medical records of  
2 Mr. Andrade's to review?

3 A. I did.

4 Q. Did they include psychiatric records or treatment?

5 A. A few, but not a lot.

6 Q. Was there treatment for anything more severe than reported  
7 anxiety or incidence of depression?

8 A. No.

9 Q. Did you have any other independent collateral information  
10 or, rather, collateral information, something other than your  
11 diagnostic interview, your behavioral observations, and your  
12 battery of tests that you used in forming any opinion that you  
13 have formed about Marcus?

14 A. Yes, I did.

15 Q. What was that?

16 A. I had his spouse complete an objective measure of her  
17 perspective of his executive functioning. I know that was --  
18 yeah.

19 Q. And is there a name for that test?

20 A. It's the Behavior Rating Inventory of Executive  
21 Functioning adult form.

22 Q. And is a spouse an ordinary collateral source that is used  
23 in your line -- in your profession during the course of  
24 conducting your comprehensive neuro- -- sorry --  
25 neuropsychological evaluation?

1 A. Yes.

2 Q. Were you able to reach a diagnosis or diagnoses about  
3 Marcus after your evaluation?

4 A. I was.

5 Q. And when did this evaluation take place?

6 A. I believe in July of last year.

7 Q. Thank you.

8 A. Mm-hmm.

9 Q. Could you please tell the jury the components of your  
10 diagnosis, just if you have found any conditions, disorders, or  
11 illnesses that he suffers from?

12 A. The results from my evaluation and my observations of him,  
13 in my opinion, were most consistent with autism spectrum  
14 disorder, Level 1 severity, which is the high functioning side  
15 of autism.

16 I also diagnosed ADHD combined presentation, where what  
17 that means is it is a -- we have three subtypes of ADHD, and  
18 it's both a hyperactive, impulsive, and inattentive type.

19 I also diagnosed obsessive-compulsive disorder and I  
20 diagnosed bipolar disorder.

21 Q. And are these the conditions that are displayed for the  
22 jury at this time? Is that consistent?

23 A. Yes, ma'am.

24 Q. Is another word for autism or another way of describing  
25 autism spectrum disorder ASD?

1 A. Yes.

2 Q. Is that the shorthand?

3 A. That's the acronym; that's correct.

4 Q. And in order to make these diagnoses, you reviewed a  
5 number of testing results; is that right?

6 A. Mm-hmm.

7 Q. Were some of Mr. Andrade's results considered by you to be  
8 exceptionally low?

9 A. Yes.

10 Q. What were the areas of his scores that you saw patterns of  
11 scoring that you deemed to be exceptionally low?

12 A. Primarily in the brain functioning domains of attention  
13 and executive functioning. And when I say "executive  
14 functioning," just to clarify, that includes mental flexibility  
15 and social cognition. And I can explain that further, if  
16 needed.

17 Q. Let's start with mental flexibility. What does that term  
18 refer to?

19 A. Mental flexibility is the ability to stop thinking a  
20 thought and fluidly switch to another thought and then stop  
21 that and fluidly switch back. It's the ability to be  
22 interrupted and be able to redirect yourself back to whatever  
23 task was at hand.

24 It's also an aspect of working memory, which is how much  
25 information can you keep in mind at one given time without

1 forgetting it. So if I wrote -- if I told you my cell phone  
2 number, you had to memorize it to go write it down, how long  
3 can you keep that in mind before you start to forget it?  
4 That's an aspect of it.

5 **Q.** And you described something that you called social  
6 cognition. Are you talking about how someone does at a party  
7 or at a social? Do a little more work than that in that  
8 phrase.

9 **A.** Right. No, not that type of socializing. Social  
10 cognition is social skills. And social skill development -- or  
11 if we're talking about a kid, we would talk about whether or  
12 not they met -- they have met their social  
13 milestones -- right? -- their social skill milestones.

14 And social cognition is the ability to take perspective or  
15 imagine what others are thinking, it's the ability to  
16 accurately read non-verbal communication in others, and it's  
17 the ability to imagine a perspective other than your own.

18 **Q.** Does social cognition include the ability to communicate  
19 in writing with other people?

20 **A.** Does it -- I'm sorry. Does it include that?

21 **Q.** Does it include the ability to cognize or understand  
22 written communications with other people?

23 **A.** I just want to make sure I'm getting your question right.  
24 So does having social cognition allow you to do that? Is that  
25 what you're asking me?

1 Q. Are skills related to communication with other people part  
2 of the umbrella of social cognition?

3 A. Yes. That's under -- the ability to read between the  
4 lines, you know, both metaphorically and, I guess, practically,  
5 where understanding written communication is an aspect of  
6 social cognition and imagining what that person is trying to  
7 communicate, yep.

8 Q. And did your results give you any findings significant  
9 about Mr. Andrade's long-term memory?

10 A. They did, and he scored in the exceptionally low category  
11 on short-term, which is the learning side of memory, and  
12 long-term recall and, specifically, for verbal information.

13 Q. And same question with respect to intelligence findings.  
14 Where did you find his intelligence on the comparative scores  
15 of other people?

16 A. Sure. So I administered the gold standard, legally  
17 accepted across everywhere Wechsler Adult Intelligence Scale,  
18 Fourth Edition, and it's a battery of more than ten tests, but  
19 the ten tests that you give are how we derive one's  
20 intelligence or IQ. And I gave all ten of those subtests and  
21 was able to obtain an IQ of him.

22 Q. And have you heard of the bell curve with respect to  
23 describing IQ?

24 A. I have.

25 Q. Could you describe what that is to the jury?

1     **A.**    So the bell curve, or the normal distribution, is that if  
2     we were to line up the intelligence of a population from lowest  
3     to highest, it would pile up in the middle, meaning that the  
4     probability of you just randomly picking out somebody with a  
5     really, really low score or a really, really high score is  
6     really low on the ends of the bell curve; whereas in the  
7     middle, if we were just randomly choosing from a population, we  
8     are more likely going to get scores that are close to the  
9     average.   Right?

10    **Q.**    And where on that bell curve idea did Mr. Andrade's scores  
11    fall with respect to intelligence?

12    **A.**    At the 16th percentile.

13    **Q.**    And is that in the middle of the bell curve or where would  
14    you place it?

15    **A.**    It is in the low average range, technically, and a -- it's  
16    on the very low end of what we would classify as a normal IQ.

17    **Q.**    And when you're looking at scores and viewing patterns in  
18    the scores, what is the comparative person that you're using to  
19    establish the norm to see whether or not there's an abnormal  
20    result here?   Who are you comparing the results to?

21    **A.**    And that's -- and that's what I believe the most about our  
22    tests, and that's the power of our tests, is that I'm comparing  
23    all of his raw scores on all the tests that I give to normative  
24    samples of men his same age and years of education who have no  
25    history of any diagnosis, no medical history whatsoever.

1           So we're trying to get a representative selection of men  
2 just like him so that I can take his score and know where he  
3 stands in relation to that average or the normal range.

4   **Q.**   Now, while you were evaluating Marcus and you conducted a  
5 diagnostic interview, prior to that, had you given him any sort  
6 of questionnaire?

7   **A.**   I did. So I gave him my typical patient, intake patient,  
8 questionnaire that I think I was telling you I developed about  
9 ten years ago when I first started out that includes a whole  
10 bunch of questions about from childhood and early development  
11 all the way through vocational history and things like that.

12           And I get patients that are always complaining about how  
13 long it is, but it's very comprehensive. And it's generic in  
14 the sense that it allows me to gather information efficiently  
15 across a wide range of domains like developmental history,  
16 academic history, and so forth.

17   **Q.**   Do you usually review that questionnaire before you begin  
18 your diagnostic clinical evaluation?

19   **A.**   Yes.

20   **Q.**   And in Mr. Andrade's case, did you, prior to the  
21 completion of your interview, your diagnostic interview with  
22 him, form a working hypothesis?

23   **A.**   I did.

24   **Q.**   What was that hypothesis?

25   **A.**   I have done this long enough to know that when a patient

1 completes that questionnaire and reports early childhood  
2 speech/language delays, fine motor coordination delays, and  
3 even episodes of mutism, that there's a high probability I'm  
4 looking at something neurodevelopmental from a diagnostic  
5 standpoint because we're talking about developmental delays,  
6 which we know that developmental delays are almost always  
7 present with neurodevelopmental disorders.

8 **MS. DIAMOND:** Your Honor, I think this is a good  
9 stopping point in Dr. Armstrong's testimony. We're two minutes  
10 shy of 1:30.

11 **THE COURT:** Yes, yes.

12 Okay. Members of the jury, remember my admonitions. Do  
13 not discuss this amongst yourselves, with anyone else. Don't  
14 do any research. Nothing about the case.

15 We'll see you tomorrow at 8:30.

16 (Proceedings were heard out of the presence of the jury.)

17 **THE COURT:** We're out of the presence of the jury.  
18 We'll see you-all at 3:30.

19 (Recess taken at 1:29 p.m.)

20 (Proceedings resumed at 3:36 p.m.)

21 (Proceedings were heard out of the presence of the jury.)

22 **THE COURT:** Okay. So before we delve into the jury  
23 instructions or the verdict form, let me give you the upshot of  
24 what I was requested to do with respect to the impeachment  
25 issues.



1 Thank you for the Ninth Circuit information, and then my  
2 diligent folks jumped into it to an even greater degree.

3 I'm not going to go through all of Rule 613 and where it  
4 goes. To make a long story short, I do think that there is --  
5 contrary to my initial reaction about you can't impeach with  
6 extrinsic information, I think that -- while that concept does  
7 play itself out, I think 613 does contemplate you can in the  
8 appropriate situation.

9 If a witness, however, says, "I don't" -- "I don't  
10 remember, but I probably said it," if there's no pushback,  
11 I think that's a problem with respect to any intent to try to  
12 impeach.

13 And I also think it can't be about a collateral issue.  
14 Whether or not I said the statement is a collateral issue to  
15 me. It's got to be some underlying issue that is being -- that  
16 is subject to the impeachment.

17 All of that said, this is what I think you can do. There  
18 are three of these trial testimony brackets, events that  
19 I think you can call an FBI agent to impeach.

20 The first one involves Mr. Szeder, S-z-e-d-e-r, and it's  
21 at pages 1357 and 1358. It's the back-and-forth with respect  
22 to the white paper, although I thought that was a pretty close  
23 call, but I'll let the defense call an agent for purposes of  
24 establishing what was said in the 302.

25 Okay. The second one, which is of more consequence

1 probably, is page 1832, which is Mr. Abramoff and the  
2 discussion about Morgan & Morgan. So you can call an FBI agent  
3 to impeach about that.

4 And the third one is involving Mr. Carlsen, and that's at  
5 page 1278 to 1279, and that's the million dollars spent on  
6 development.

7 Those are the three.

8 **MR. SHEPARD:** Okay. Thank you, Your Honor.

9 Can we, for the record, just mark that? And the "that" is  
10 what we gave the Court as our list of --

11 **THE COURT:** Do you have a -- I marked this up. Do you  
12 have one that's not marked?

13 **MR. SHEPARD:** I'm sure we do somewhere.

14 **THE COURT:** Yes, it can go into the record.

15 I don't know -- Corrine, can they just file something like  
16 this?

17 **THE COURTROOM DEPUTY:** It would have to have the case  
18 name and number.

19 **THE COURT:** Can you put the case name and number on it  
20 and then you can file it?

21 **MR. SHEPARD:** Yes. We will do that. Thank you.

22 **THE COURT:** All right. I mean, you may want to take  
23 those three out of this because I'm letting you do those three.  
24 And I don't know if that's one FBI agent or more.

25 **MR. HIGHSMITH:** I don't either.

1           **THE COURT:** Okay.

2           **MR. SHEPARD:** We have a list somewhere.

3 Unfortunately, Ms. Dent is chasing down something she forgot  
4 upstairs.

5           **MR. HIGHSMITH:** We'll figure it out quickly.

6           **THE COURT:** All right.

7           **MR. HIGHSMITH:** This is not hard.

8           **THE COURT:** Okay. So let's talk now. Let me first  
9 ask you about the verdict form.

10           **MR. SHEPARD:** I -- let me grab that one. I came with  
11 the instructions first.

12           I did -- I did have one issue with the verdict form,  
13 although I expect it's more of just preserving the record  
14 because it's something that the Court did not accept in our  
15 jury instruction argument; and that is, the verdict form for  
16 Count -- or the way the verdict form reads for Count Two, it  
17 does not require unanimity on the basis of conviction. And  
18 I think we had made an argument about that in the jury  
19 instructions. The Court didn't accept our argument. I just  
20 want to preserve that argument for the verdict form.

21           **THE COURT:** Okay. Fair enough.

22           Beyond that?

23           **MR. SHEPARD:** No, I have nothing.

24           **THE COURT:** All right. And I will tell them -- when I  
25 get to those instructions at the end of the case, I'm going to

1 tell them to -- I mean, the way you've got this verdict form,  
2 you've got a blank, and then you've got guilty/not guilty.  
3 Shall we say, "Please circle the applicable one"? Or do you  
4 want them to write it in? This is your recommendation.

5 **MR. HIGHSMITH:** Oh. Usually, they just check the  
6 correct box. Well, they should write it in.

7 **THE COURT:** So I will tell them to write -- those are  
8 your two choices: guilty/not guilty. Write your choice --

9 **MR. HIGHSMITH:** Correct.

10 **THE COURT:** -- in on the underline.

11 **MR. HIGHSMITH:** Correct.

12 **THE COURT:** Okay.

13 **MR. HIGHSMITH:** Please.

14 **THE COURT:** All right. There are only two, but  
15 ordinarily, I would put -- because I'm a big believer in leave  
16 nothing to doubt, make it as literal as possible, I would  
17 sometimes after 1 say, "Go to Answer Number 2." But with only  
18 two, if they came back and they didn't answer one, I'd just  
19 send them back. So it's all right.

20 Okay. And you want the statutory reference in there and  
21 the -- okay.

22 **MR. HIGHSMITH:** You know, to be honest, six of one,  
23 half dozen of another.

24 **THE COURT:** I don't care. I'll leave it in there.  
25 That's what you want.

1           Okay. So turning to the instructions, why don't we do  
2     like what we did when we went over the jurors for hardship, and  
3     tell me the first one that somebody wants to say something  
4     about, or I also recognize that there are instructions that you  
5     have proposed that are not included in here.

6           As I said yesterday, you can memorialize your objection  
7     any way you want. I think, frankly -- I think you probably  
8     have preserved it by virtue of having a different set, but far  
9     be it from me to suggest how you want to preserve your  
10    objections. So if you want to preserve your objections, feel  
11    free. But why don't we go through these first, and then if you  
12    want to say, "By the way, we object that you didn't give  
13    these," that's fine with me.

14          Okay. Who's got -- what's the first one? And, again,  
15    just to remind everybody, I'm going to take out everything but  
16    a number once we get to the final version. So, for example,  
17    6.1, Duties of Jury, it will simply have 1 and then the  
18    instruction and it won't have the footer obviously. So...

19           **MR. HIGHSMITH:** Understood.

20           **MR. SHEPARD:** My first one is 3.3.

21           **THE COURT:** Okay. Do you have anything before 3.3?

22           **MR. HIGHSMITH:** No.

23           **THE COURT:** All right. Let me find 3.3. Let me get  
24    it first.

25           **MR. SHEPARD:** My objection to that is just the listing

1 of, I think, everything in 404(b) as a potential justification.  
2 I think the -- the way the sentence reads, it's like you can  
3 consider this for pretty much anything. And so I object to  
4 having all those different terms in the second sentence.  
5 I think it should be much more focused.

6 **THE COURT:** So you want -- first of all, do you want  
7 this instruction in there? Does somebody want it?

8 **MR. SHEPARD:** Well, I mean, the way it's currently  
9 written, probably not. So the question is: Can it be more  
10 limited? Otherwise, I think there are other instructions that  
11 are better than this.

12 **THE COURT:** I mean, I, frankly, thought this was an  
13 instruction that was one the defense usually wants because it's  
14 essentially saying you can't convict him for anything other  
15 than the acts charged; but if you don't want it --

16 **MR. SHEPARD:** I think there is a separate instruction  
17 that says what the Court just said --

18 **THE COURT:** All right.

19 **MR. SHEPARD:** -- namely, that you can't convict him  
20 for something other than the crime charged.

21 And so the way this is currently written, I don't think it  
22 adds --

23 **THE COURT:** Well, I also didn't quite know which  
24 crimes, wrongs, or acts. I'm not sure what -- I mean, there's  
25 been evidence about maybe wrongs or acts. There's no criminal

1 conviction that's come into evidence, is there?

2 **MR. SHEPARD:** Right. I mean, the -- it's Aten Coin  
3 and the failure to file taxes.

4 **THE COURT:** Failure to file tax returns, that's right.

5 **MR. HIGHSMITH:** We'd get rid of "crimes."

6 **THE COURT:** Well, do we need it at all? I mean, I  
7 don't know what -- if we really --

8 **MR. HIGHSMITH:** Our position is we want it because  
9 I think it captures the Aten Coin and it captures the late  
10 filing of the taxes. And it's the model instruction. So we do  
11 not want to modify the language too much because this is the  
12 model instruction.

13 **THE COURT:** Well, you want it -- how -- my  
14 impression -- my understanding from Mr. Shepard is he wants to  
15 take out "crimes." Or you don't want to take out "crimes"?

16 I mean, there is evidence, now that you've reminded me, of  
17 the tax. I mean, Aten Coin -- Aten Coin didn't result in  
18 criminal charges. It was just an investigation; right?

19 **MR. HIGHSMITH:** Correct.

20 **THE COURT:** So -- and while the failure to file a tax  
21 return may be actionable, he didn't get charged with it. So  
22 I think "crimes" sort of connotes convictions.

23 **MR. HIGHSMITH:** We're fine taking out "crimes."  
24 Absolutely fine striking the word "crimes." We do think it's  
25 appropriate because there is the other wrongs or acts not

1 charged, but we're fine taking out "crimes."

2 **THE COURT:** Okay.

3 **MR. SHEPARD:** Even with that, I object to it for the  
4 reasons stated.

5 **THE COURT:** Let me just look at the commentary on this  
6 one.

7 Well, as I'm looking at the instruction, it has brackets  
8 around all of the "You may consider this evidence only for its  
9 bearing, if any, on the question of the defendant's" and then  
10 it's got bracketed "intent, motive, opportunity, preparation,  
11 plan, knowledge, identity, absence of mistake, absence of  
12 accident, and for no other purpose."

13 Are all of those applicable?

14 **MR. HIGHSMITH:** No. Intent -- I think all of them  
15 actually are at issue. The tax returns and the Aten Coin  
16 conduct goes to intent. It goes to opportunity.

17 Preparation because it rolls right into the AML BitCoin.

18 The plan, it rolls -- the Aten Coin rolls right into the  
19 AML BitCoin.

20 Knowledge, if he's done Aten Coin once, he then goes to do  
21 substantially similar conduct the second time; therefore, that  
22 goes to knowledge.

23 It goes to the absence of mistake. Doing this the second  
24 time is not a mistake. He had done it once before. It was not  
25 an accident. He had done it once before.



1           **THE COURT:** How about motive?

2           **MR. HIGHSMITH:** That's the only one. I think they do  
3 not go to motive. I think "motive" should be stricken.

4           **THE COURT:** Okay.

5 All right. Well, Mr. Shepard has preserved his objection.  
6 I will -- I will include it, and it's going to read [as read]:

7 "You have heard evidence that the defendant  
8 committed other wrongs or acts not charged here. You  
9 may consider this evidence only for its bearing, if  
10 any, on the question of defendant's intent,  
11 opportunity, preparation, plan, knowledge, absence of  
12 mistake, and absence of accident and for no other  
13 purpose."

14 Okay. 3.8 and 3.9 were sort of confusing to me because  
15 3.8 is kind of the general impeachment thing and then 3.9 is  
16 the one that -- well, 3.9, I guess, is talking about plea  
17 agreements and that kind of thing.

18 So what's going to be filled in on here?

19           **MR. SHEPARD:** So the way we parsed that, and we spent  
20 a fair amount of time trying to figure out what was 3.8 and  
21 what was 3.9 also, but this is what we would propose for 3.8  
22 [as read]:

23 "You have heard evidence that" -- and I'm going  
24 to skip the name for a second because I've got a  
25 list -- "You have heard evidence that a witness" and

1 then "testified contrary to at least one statement  
2 the witness made to the FBI and/or testified contrary  
3 to at least one prior written statement the witness  
4 had made."

5 I think those are both accepted forms of impeachment.  
6 Those were both means of impeachment that we used for the  
7 following witnesses: John Szeder --

8 Am I too fast for you? Sorry.

9 **MR. HIGHSMITH:** No, no. It's okay.

10 What was the last thing you said? At least one prior  
11 written statement and then you had --

12 **MR. SHEPARD:** "Prior written statement the witness had  
13 made."

14 **MR. HIGHSMITH:** Okay. Thank you.

15 **MR. SHEPARD:** And our list would be John Szeder,  
16 S-z-e-d-e-r; Evan Carlsen, C-a-r-l-s-e-n; Melanie Cowan,  
17 C-o-w-a-n; John Bryan, B-r-y-a-n; Brian Darrow, D-a-r-r-o-w;  
18 Jack Abramoff; Bernadette Cowan-Tran, same Cowan spelling,  
19 C-o-w-a-n and then dash T-r-a-n; Brandi -- I never pronounce  
20 her name right -- Jodoin or Jodoin. Those are -- and I'm  
21 sorry. Carlos De La Guardia.

22 **THE OFFICIAL REPORTER:** And you don't spell Jodoin?

23 **MR. SHEPARD:** Sorry. I was on a roll there.  
24 J-o-d-o-i-n.

25 **THE COURT:** Well, other than Szeder, Carlsen, and

1 Abramoff, who we just talked about in terms of impeachment and  
2 FBI 302s, I don't remember any of the other witnesses -- I  
3 mean, again, this may go back to what is impeachment. If you  
4 said -- if they say "I don't recall" and you give them the 302  
5 and they say "Well, I still don't remember it, but I have no  
6 reason to believe I didn't give this statement," I don't think  
7 they're really being impeached.

8 **MR. SHEPARD:** Well, the ones who -- leaving aside the  
9 particular impeachment the Court has already dealt with, these  
10 are people who said something contrary to their testimony to  
11 the FBI and, when impeached, they said, "Yeah, I did say that  
12 to the FBI."

13 **THE COURT:** Well, okay.

14 **MR. SHEPARD:** So they were impeached. They were shown  
15 to have testified falsely, and I believe that's what 3.8 is  
16 about.

17 **MR. HIGHSMITH:** Well, the commentary says that 3.8 is  
18 specifically about a witness's character for truthfulness and  
19 impeachment by evidence of a criminal conviction. So --

20 **THE COURT:** Let me go there and see. I've never given  
21 this instruction in the way that it's just been described, but  
22 let's see.

23 **MR. HIGHSMITH:** I think one of -- there are  
24 potentially several issues. One issue is that the comment does  
25 not capture the circumstance where a witness says, "I may have

1 said that, but I don't recall." That is outside the gambit of  
2 the comment to this instruction.

3 **MR. SHEPARD:** That's not this list. This list, as  
4 I believe we constructed it, was "You testified differently  
5 than what you had previously said, either in writing or to the  
6 FBI."

7 **THE COURT:** Well, I have -- I've never given this  
8 instruction in the way you're suggesting it should be given.  
9 I've never been asked to give it in that way.

10 **MR. SHEPARD:** There's always a first time.

11 **THE COURT:** But I'm not saying absolutely no. I mean,  
12 there have been a lot of witnesses that testified, and a lot of  
13 them -- I'm a little uncomfortable singling out a whole list of  
14 people when the supposed impeachment is, you know, that they --  
15 the example of somebody saying "I don't remember, but I have no  
16 reason to disbelieve it," I would not include somebody like  
17 that on the list because they're not saying any -- they're not  
18 contradicting themselves. They're just saying "I don't  
19 remember, but I agree, that sounds right." I wouldn't include  
20 any of those people on this list. And if that's all it is, I  
21 don't think that that's correct.

22 Yes, sir?

23 **MR. HIGHSMITH:** No, I agree with the Court. The  
24 commentary talks about 608 and 609. This is not -- how counsel  
25 is describing it is different, I think, than how the rule

1 contemplates it. We don't have evidence about their character  
2 for truthfulness or untruthfulness or impeachment with criminal  
3 convictions.

4 **THE COURT:** Well, let me go back and look at that one  
5 because that -- I just -- I haven't seen it used in this  
6 fashion. So give me your list.

7 **MR. SHEPARD:** I will give you the list. And I heard  
8 what the Court said about my list. I will double-check my list  
9 based on what the Court just said --

10 **THE COURT:** Okay.

11 **MR. SHEPARD:** -- to make sure I'm in compliance.  
12 But here is my list in the meantime.

13 **THE COURT:** Okay.

14 **MR. SHEPARD:** It's John Szeder, S-z-e-d-e-r; Evan  
15 Carlsen, C-a-r-l-s-e-n; Melanie Cowan, C-o-w-a-n; John Bryan,  
16 B-r-y-a-n; Brian Darrow, D-a-r-r-o-w; Jack Abramoff; Bernadette  
17 Cowan-Tran; and Brandi Jodoin, J-o-d-o-i-n; and, finally,  
18 Carlos De La Guardia, D-e, space, as you remember, L-a, space,  
19 Guardia, G-u-a-r-d-i-a.

20 **THE COURT:** Okay. I'll go back and look at that; and  
21 if I do not include it in the way you've requested,  
22 Mr. Shepard, you've preserved your objection.

23 **MR. SHEPARD:** Thank you.

24 **THE COURT:** 3.9, this will pertain to Abramoff --

25 **MR. SHEPARD:** Abramoff and Darrow, I believe.

1           **THE COURT:** -- and Darrow.

2           **MR. HIGHSMITH:** That's it, Abramoff and Darrow.

3           **THE COURT:** Okay. And have you filled in the blanks  
4 or brackets for me?

5           **MR. SHEPARD:** Well, I'll give you what I would  
6 propose, and then I will give you the more strict  
7 interpretation in the instruction.

8           I would say Abramoff and Brian committed crimes and  
9 reached favorable plea deals with the Government to testify,  
10 and I think that captures the essence of it.

11           The -- I don't think the form actually captures it, but it  
12 seems like Mr. Darrow would fall into the first subpart of the  
13 form, received benefits, compensation, favored treatment from  
14 the Government in connection with this case in the sense that  
15 my recollection is he was not forced to plead guilty in  
16 connection with what he did with Aten Coin. He instead pled  
17 guilty to something -- one of his many other crimes.

18           Mr. Abramoff would fall into the third bucket because he  
19 did plead guilty to a crime arising out of the same events for  
20 which the defendant is on trial.

21           But I find those categorizations to be -- to not really  
22 capture because Darrow could have been charged with and pled  
23 guilty relating to Aten Coin. They just chose to charge him  
24 with something else instead. So that's why I had trouble with  
25 the categories and preferred the language that I proposed.

1           **MR. HIGHSMITH:** So, obviously, we would stick to the  
2 model instruction. Abramoff fits all three buckets, so we  
3 would do the Abramoff language to say, starting with Bucket 1,  
4 "received benefits from the Government in connection with the  
5 case." The benefit would be continuing his sentencing.

6           He also admitted to being an accomplice to the crime  
7 charged or a co-schemer, so Abramoff fits into the second  
8 bucket. And then, of course, Abramoff fits into the third  
9 bucket.

10          So for Abramoff I would follow the model and include all  
11 three buckets.

12          **THE COURT:** We're talking about separate instructions  
13 for each person rather than trying to lump them into a --

14          **MR. HIGHSMITH:** I think that's right because they are  
15 differently situated.

16          For Mr. Darrow, what I would do is I would use Bucket 1  
17 and I would use Bucket 3.

18          **THE COURT:** Did Darrow plead guilty to a crime arising  
19 out of the same events?

20          **MR. HIGHSMITH:** It was the same investigation. It  
21 was -- Darrow's involved in Aten Coin. He learns about  
22 Aten Coin and he goes, "Oh, that's an amazing scheme. I can do  
23 that myself." So then he goes off and he does something called  
24 Javacoin where he uses Mr. Andrade's Aten Coin model to commit  
25 his own fraud scheme. He is charged and pled guilty to his

1 Javacoin fraud scheme.

2 So it's arising out of this investigation, it's somewhat  
3 arising out of this case, but it is not the four corners of  
4 this case.

5 **THE COURT:** Well, okay. Putting aside for a moment  
6 what Mr. Shepard is recommending, pleaded guilty to a crime  
7 arising out of the same investigation for which the defendant  
8 is on trial?

9 **MR. HIGHSMITH:** Yes.

10 **THE COURT:** Okay. Now, did you -- I'm not sure I  
11 followed all of the changes you wanted on this, but what's your  
12 view of -- I know you say you prefer the pattern instruction.  
13 Run this by me again what you think is --

14 **MR. SHEPARD:** I was proposing something more simple  
15 [as read]:

16 "You have heard testimony from Jack Abramoff and  
17 Brian Darrow who committed crimes and reached  
18 favorable plea deals with the Government to testify."

19 **THE COURT:** And then it would go on [as read]:

20 "For this reason, in evaluating the testimony of  
21 the two of them, you should consider the extent to  
22 which each" --

23 **MR. SHEPARD:** I would actually pick up one line above  
24 that [as read]:

25 "The guilty plea is not evidence against the



1 defendant, and you may consider it only in  
2 determining this witness's believability," and then,  
3 "for these reasons in evaluating the testimony," as  
4 the Court suggested.

5 **THE COURT:** Well, if there were separate instructions  
6 for both Darrow and Abramoff but they were effectively the same  
7 thing, just two separate instructions, doesn't that sort of  
8 simplified approach take care of this?

9 **MR. HIGHSMITH:** It simplifies it, but it doesn't --  
10 (a) it's not the model. It doesn't follow the model.

11 **THE COURT:** I like the model, but that doesn't mean we  
12 always give the model.

13 **MR. HIGHSMITH:** Obviously, we don't agree with the  
14 term "favorable," "a favorable plea deal." I mean, this is --

15 **THE COURT:** I understand.

16 **MR. HIGHSMITH:** The plea deal is to tell the truth and  
17 to fully cooperate.

18 **THE COURT:** Well, if you took out "favorable"?

19 **MR. HIGHSMITH:** Yes, we would agree to it.

20 **THE COURT:** So --

21 **MR. HIGHSMITH:** Again, we like the model.  
22 The Government's always hesitant to deviate from the model,  
23 Your Honor.

24 **MR. SHEPARD:** Well, I would say as to the word  
25 "favorable," that the model has "favored treatment." I didn't

1 just concoct that. I mean, I -- so I do have a problem with  
2 taking that out. It does come from the model.

3 **MR. HIGHSMITH:** And then, of course, from the model,  
4 we think the language in Bucket 3, "pleaded guilty to a crime  
5 arising out of the same investigation for which the defendant  
6 is on trial," is important language.

7 **THE COURT:** Well, do this for me: Each side submit to  
8 me their proposal for 3.9. Tell me if you want a joint  
9 instruction or separate instructions for Abramoff and Darrow,  
10 and then I will look at them and decide.

11 **MR. HIGHSMITH:** Understood.

12 **THE COURT:** Okay. 3.14 is -- can we merge the four  
13 experts into this one instruction?

14 **MR. HIGHSMITH:** Yes, Your Honor. The only question is  
15 Dr. Amanda Gregory, who's the Government's rebuttal. So we'd  
16 have to -- if we end up calling her in rebuttal, we'd have to  
17 slot that in.

18 **THE COURT:** Okay. And -- all right.

19 **MR. HIGHSMITH:** We're going to see how Mr. Armstrong  
20 finishes up.

21 **THE COURT:** Okay. So it's three or four.

22 **MR. HIGHSMITH:** Yes.

23 **THE COURT:** The bottom line is, we can use the same  
24 instruction, just add that expert in if that expert testifies.

25 **MR. SHEPARD:** I think it's actually four or five, but

1 yes.

2 **THE COURT:** Who -- so we've got --

3 **MR. SHEPARD:** We've got Ms. Chiu and Carfora from  
4 the Government, Min and Armstrong --

5 **THE COURT:** Okay. Right.

6 **MR. SHEPARD:** -- and then potentially Gregory.

7 **THE COURT:** Gotcha. Gotcha.

8 Can you just remind me of -- somebody submit the list of  
9 names for me?

10 **MR. HIGHSMITH:** Yes.

11 **THE COURT:** Okay. 6.9 is pretty straightforward.

12 3.16, we've had both charts and summaries in evidence and  
13 used as demonstratives, so we would have both.

14 Well, what's the next one anybody has?

15 **MR. HIGHSMITH:** He'll probably pop up first.

16 **THE COURT:** Okay. Mr. Shepard?

17 **MR. SHEPARD:** My next one is wire fraud --

18 **THE COURT:** Okay. So you're --

19 **MR. SHEPARD:** -- 15.35.

20 Oh, it seems like I skipped one.

21 **MR. STEFAN:** Your Honor, just that defense preserves  
22 its objections as provided in the joint filing regarding  
23 deliberate ignorance.

24 **MR. SHEPARD:** Oh, yeah. Sorry. I meant to --

25 **THE COURT:** Well, I'm going to let you kind of do a

1 global preservation of objections once we get through the -- is  
2 that -- that's one that I omitted or I left in and you want  
3 out.

4 **MR. SHEPARD:** You left it in.

5 **THE COURT:** So when we get to that, you can tell me  
6 you want it out.

7 **MR. SHEPARD:** Yes.

8 **THE COURT:** Because we haven't gotten there yet.

9 **MR. STEFAN:** Pardon me, Your Honor. I jumped the gun.

10 **THE COURT:** Okay. All right. So --

11 **MR. SHEPARD:** So --

12 **THE COURT:** So the first one that you want to talk  
13 about is wire fraud?

14 **MR. SHEPARD:** Yes.

15 **THE COURT:** And do you, Mr. Highsmith, have anything  
16 before wire fraud?

17 **MR. HIGHSMITH:** No, Your Honor.

18 **THE COURT:** Okay. Wire fraud. Go ahead, Mr. Shepard.

19 **MR. SHEPARD:** I have two pieces relating to 15.35.  
20 One Mr. Stefan is the expert in but I'll get started, and the  
21 other relates to the Court included "good faith" language,  
22 which we appreciate, but did not include, from the typical good  
23 faith instruction, the language that the defendant does not  
24 have to prove his good faith, which I think is very important  
25 on burden of proof. And so we would ask the Court to add that

1 sentence.

2           **THE COURT:** Just so that it's clear on the record, I  
3 didn't include it because I think it is covered in the overall  
4 burden instruction and reasonable doubt, and so I don't think  
5 it's necessary to underscore it as an additional burden issue.

6           So I heard you, you preserved the evidence, but I'm  
7 leaving it out.

8           **MR. SHEPARD:** Okay. Thank you, Your Honor.

9           The other issue is another thing that I think will fall  
10 into the category of preservation, and that is that we had  
11 submitted some additional unanimity language. And this is  
12 because, I mean, back when I was a prosecutor, there were  
13 various terms in statutes like "materiality" in 18 U.S.C. 1001,  
14 that the Court would just instruct the jury this is material.

15           And there have now been many United States Supreme Court  
16 decisions in different contexts, not relating to a wire fraud  
17 charge but in different contexts, that say, "If the words are  
18 in the statute, they've got to be pled and they've got to be  
19 proven. Beyond a reasonable doubt, the jury has to find them."  
20 And so that was our -- we had an objection along those lines to  
21 the wire fraud instruction.

22           And it comes up even more clearly for us in the money  
23 laundering instruction. In the money laundering instruction, I  
24 know there are Ninth Circuit cases that do not accept our  
25 argument, but they're old. They haven't been rethought in

1 light of the Supreme Court precedent.

2 **MR. HIGHSMITH:** We'd like to stick with the  
3 instructions, which tag closely to the model.

4 **THE COURT:** When did the Circuit last opine on that --

5 **MR. HIGHSMITH:** I don't know the answer.

6 **THE COURT:** -- unanimity issue?

7 **MR. HIGHSMITH:** I do not know.

8 **MR. CHOU:** Well, Your Honor, the wire fraud  
9 instruction was recently amended to reflect the *Milheiser*  
10 decision from the Ninth Circuit. So I think this is a -- this  
11 is an instruction that's not sitting moribund or anything like  
12 that.

13 **THE COURT:** Okay. Well, you've preserved your  
14 objections on that.

15 **MR. SHEPARD:** Yeah. It's a little more poignant in  
16 the next one where there's this language about specified  
17 unlawful activity, which we think needs to be pled and proven  
18 beyond a reasonable doubt, but it's basically the same  
19 principle.

20 **THE COURT:** Okay.

21 **MR. HIGHSMITH:** And, again, we would like to keep the  
22 current version because it follows the model instruction.

23 **THE COURT:** Next.

24 **MR. SHEPARD:** The next one I have is, as Mr. Stefan  
25 was anticipating, the deliberate ignorance instruction, which

1 we object to. We think it would be particularly confusing in  
2 this case because part of the defense in this case is, I would  
3 call it innate ignorance or unintelligent ignorance as opposed  
4 to deliberate ignorance, and I don't want the jury to be  
5 confused by how to address that evidence.

6 **MR. HIGSMITH:** I actually think that shows why this  
7 is an important instruction. There's been a lot of testimony  
8 elicited by the defense about what Mr. Dillman did, obviously  
9 what Mr. Abramoff did, what other people did. And the  
10 defendant is the founder and CEO. He's the one in charge of  
11 this entire enterprise. So to be able to hide behind the  
12 actions of other people and say -- I don't know what "innate  
13 ignorance" means, but this seems actually particularly  
14 appropriate in this case.

15 **THE COURT:** I mean, when you say "innate ignorance,"  
16 it sort of plays into the -- isn't that really related to your  
17 diminished capacity argument in a sense?

18 **MR. SHEPARD:** I prefer to think of it more as a lack  
19 of intent to defraud argument; but, yes, it is related.  
20 However the Court wants to view that argument, it is related to  
21 that argument.

22 **THE COURT:** And I'm going to give that diminished  
23 capacity instruction.

24 So okay. Well, you've preserved that issue.

25 Okay. So what I'm looking for from you is some further

1 input on the three-point -- the impeaching stuff.

2 **MR. HIGHSMITH:** Understood.

3 **THE COURT:** You were going to give me some different  
4 versions, and I'm going to work on that. Okay?

5 Let's see. Okay. Anything else?

6 **MR. HIGHSMITH:** I'm just pausing on whether  
7 the Government needs to object to the diminished capacity  
8 instruction, Your Honor, but I'll -- I'm not going to.

9 **THE COURT:** So tomorrow, Dr. Armstrong is still on the  
10 stand. And then who's after him?

11 **MR. SHEPARD:** I think we will want to address in the  
12 morning Mr. Andrade's decision on whether he is going to  
13 testify. I think we should do that in the morning.

14 **THE COURT:** You'll be ready at 8:00? We can do that  
15 at 8:00?

16 **MR. SHEPARD:** Yes. To the extent I am in charge of  
17 it, yes.

18 **THE COURT:** Well, one way or the other, we'll get an  
19 answer at 8:00.

20 **MR. SHEPARD:** Yes, we'll be here. We'll address it.

21 **THE COURT:** Okay.

22 **MR. SHEPARD:** And -- and then we may call Raul Torres  
23 and --

24 **THE COURT:** Who's that person?

25 **MR. SHEPARD:** He's another one of Mr. Andrade's



1 accountants.

2 And we then also have to deal with the remaining documents  
3 that the Court has now allowed us to admit that have not been  
4 published.

5 We have -- over the weekend, we sent some additional  
6 documents to the Government that we are asking for a  
7 stipulation to authenticity and, if they have other objections,  
8 to let us know. We have not heard back on those. Those are  
9 also on the list.

10 Then we will either be able to reach a stipulation on the  
11 three completion of impeachment items that the Court identified  
12 earlier this afternoon, and I expect that's the end of the  
13 case. It will certainly get us through tomorrow at the rate  
14 we're going.

15 **THE COURT:** Where did things -- where were things left  
16 with respect to the whole battle about the purchase agreements  
17 and did -- was there anything left on that? There was some --  
18 I remember you preserved some issue and we were going to talk  
19 about it, and then I've lost track of where that went.

20 **MR. SHEPARD:** I believe -- and one of my colleagues  
21 can correct me if I'm wrong. I believe that you ruled on that  
22 as part of the three-part it's not hearsay argument --

23 **THE COURT:** Right.

24 **MR. SHEPARD:** -- that we filed on Sunday night.

25 **THE COURT:** So that's been resolved.

1           **MR. SHEPARD:** I believe it has been resolved.

2           **THE COURT:** And because I ruled that way, I don't  
3 think the Government needs a separate instruction about it is  
4 not -- the whatchamacallit. Why do I keep forgetting the name  
5 of the case?

6           **MR. HIGHSMITH:** Oh, *Lindsay*.

7           **THE COURT:** *Lindsay*. Thank you.  
8 You don't need a *Lindsay* instruction --

9           **MR. HIGHSMITH:** Understood.

10          **THE COURT:** -- because of how I ruled.

11          **MR. HIGHSMITH:** Okay.

12          **THE COURT:** All right?

13          **MR. HIGHSMITH:** We're just pausing on closing  
14 arguments, but I think we'll wait till next week for that.

15          **THE COURT:** So if we finish tomorrow, we get into your  
16 rebuttal, you're going to call whoever your Mr. Min equivalent?

17          **MR. HIGHSMITH:** We're not going to call Mr. Min  
18 equivalent.

19          **THE COURT:** Are you going to have any rebuttal case?

20          **MR. HIGHSMITH:** We may have Dr. Gregory, the rebuttal  
21 to Armstrong; and we have Ethan Quinn. We're going to recall  
22 Agent Ethan Quinn to address several of the arguments they  
23 made, but very briefly. He's going to introduce two documents,  
24 two or three.

25          **THE COURT:** So we could finish tomorrow?

1           **MR. HIGHSMITH:** I think so. I think we're -- if  
2 Mr. Torres seems like he'll be very short, Dr. Armstrong is  
3 almost done, I think we could finish tomorrow.

4           **THE COURT:** Okay. So that means we could have closing  
5 arguments on Monday. And the reason I'm asking is I want to  
6 tell the jury -- excuse me. If we are able to conclude  
7 tomorrow, I want to ask them to clear -- I want them to go from  
8 8:30 to 4:00 because I don't know how long your closings are,  
9 but I don't want to spread them over two days, and then also  
10 let them get started.

11           So if that's -- that's what I'm going to do if we finish.  
12 I'm going to tell them that, that I want them here for the full  
13 thing. And that does mean, then, we need to finalize these  
14 instructions hopefully tomorrow because I'm -- you know, I'm  
15 going to be away.

16           **MR. HIGHSMITH:** Understood.

17           **THE COURT:** That does, of course -- I mean, I guess we  
18 find out at 8:00 tomorrow with respect to Mr. Andrade.

19           **MR. SHEPARD:** We'll see how tomorrow goes.

20           **THE COURT:** Keep me in suspense. All right. But, I  
21 mean, that would change the calendar, obviously.

22           **MR. HIGHSMITH:** Understood.

23           **THE COURT:** Okay. Well, you kept your word. You're  
24 ahead of the game. I think the jury fortunately -- I'm glad we  
25 told them -- their current expectation is they're going through

1 all of next week, so I think we're in good shape however it  
2 shakes out. So, okay.

3 **MR. HIGHSMITH:** Thank you.

4 **MR. SHEPARD:** Thank you, Your Honor.

5 **THE COURT:** Nothing else? I can't believe it.

6 **MR. SHEPARD:** We'll work on it. We'll work on it.

7 **THE COURT:** Don't work too hard, Mr. Shepard. Take a  
8 break. Watch some TV.

9 (Proceedings adjourned at 4:20 p.m.)

10 ---o0o---

11  
12 **CERTIFICATE OF REPORTER**

13 I certify that the foregoing is a correct transcript  
14 from the record of proceedings in the above-entitled matter.

15  
16 DATE: Wednesday, March 5, 2025

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22 Ana Dub, RDR, RMR, CRR, CCRR, CRG, CCG  
23 CSR No. 7445, Official United States Reporter  
24  
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